

EXHIBIT 31



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(54) **DOCUMENT-CLASSIFICATION SYSTEM,
METHOD AND SOFTWARE**

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5, 1999.

(51) **Int. Cl.**
G06F 17/30 (2006.01)

(52) **U.S. Cl.** **707/2; 707/102**

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See application file for complete search history.

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Primary Examiner—Mohammad Ali

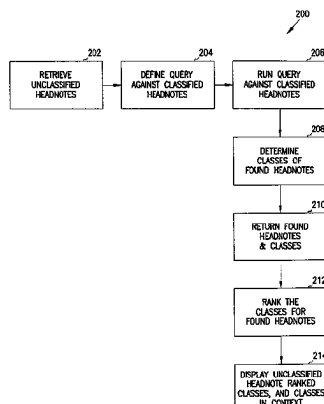
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Woessner & Kluth, P.A.

(57) **ABSTRACT**

Every year, professional classifiers at West Group manually
classify over 350,000 headnotes, or abstracts of judicial
opinions, across approximately 82,000 separate classes of
the Key Number System. Although most headnotes are
classified from the memory of the classifiers, a significant
number are difficult and thus costly to classify manually.
Accordingly, the inventors devised systems, methods, and
software that facilitate manual classification of headnotes
and documents generally and hard-to-classify headnotes
particularly. One exemplary system provides a graphical
user interface that concurrently displays an unclassified
headnote, a ranked list of one or more candidate classes,
a candidate class in combination with adjacent classes of the
classification system, and at least one classified headnote
that is associated with one of the candidate classes.

11 Claims, 7 Drawing Sheets



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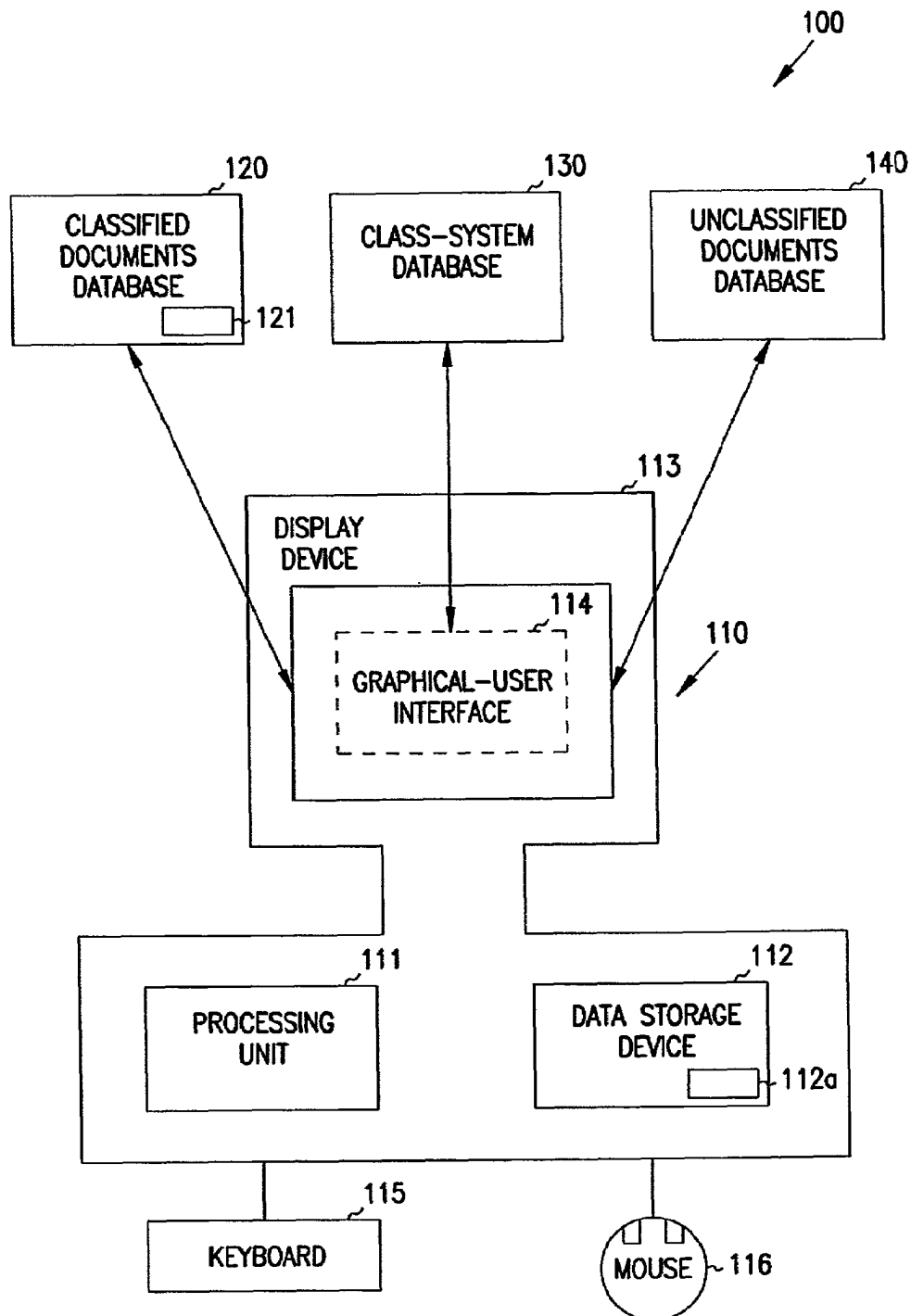


FIG. 1

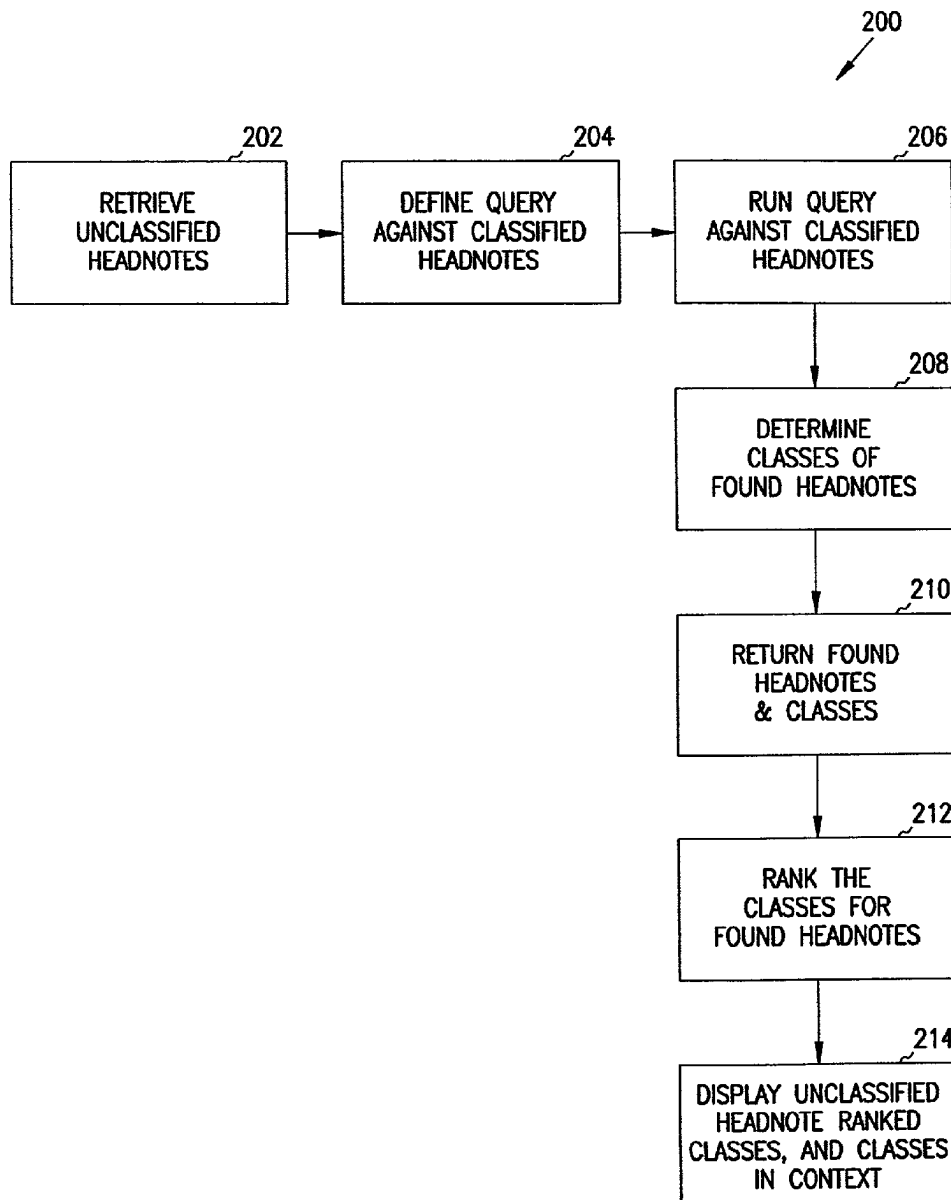


FIG. 2

300

EMPLOYER'S DUTY, UNDER NLRA, TO BARGAIN IN
GOOD FAITH INCLUDES OBLIGATION TO PROVIDE
UNION WITH INFORMATION RELEVANT TO COLLECTIVE
BARGAINING PROCESS IN CERTAIN CIRCUMSTANCES.

300'

```

sum (
  employer
  duty
  nlra
  bargain
  #phase (
    good
    faith
  )
  includes
  obligation
  provide
  union
  information
  relevant
  #phase (
    collective
    bargaining
  )
  process
  certain
  circumstances
  #phase (
    national
    labor
    relations
    act
  )
  amended
)

```

FIG. 3

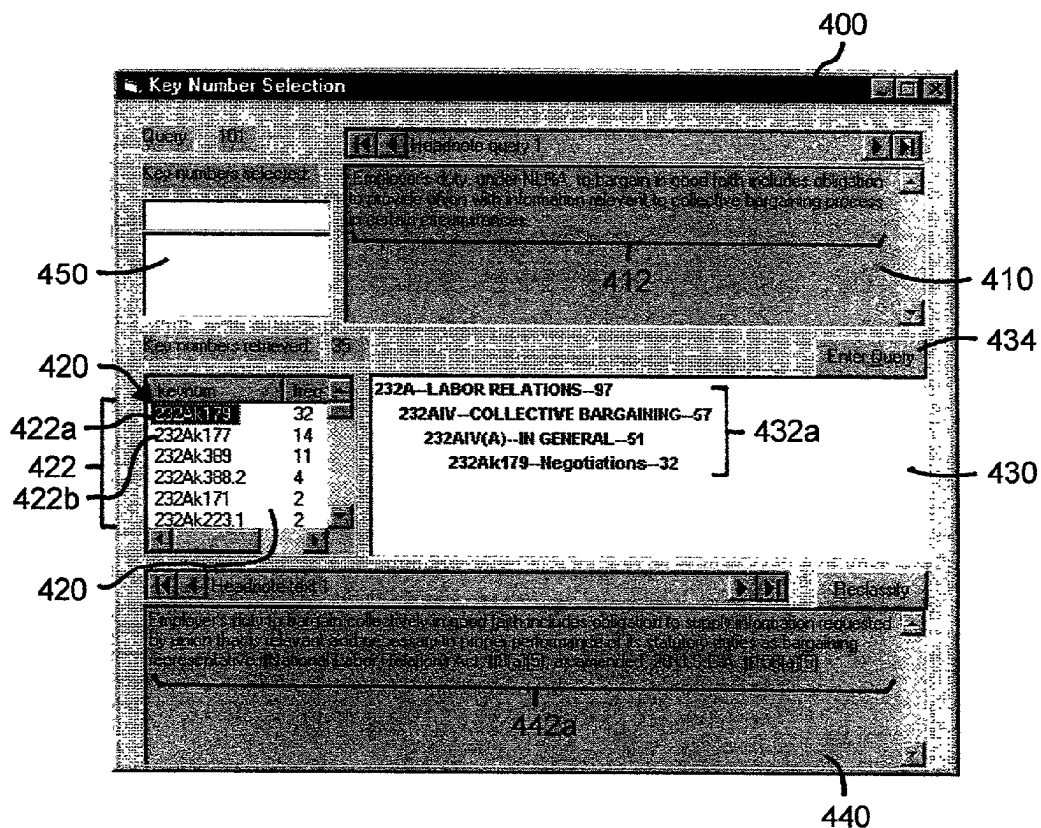


FIG. 4A

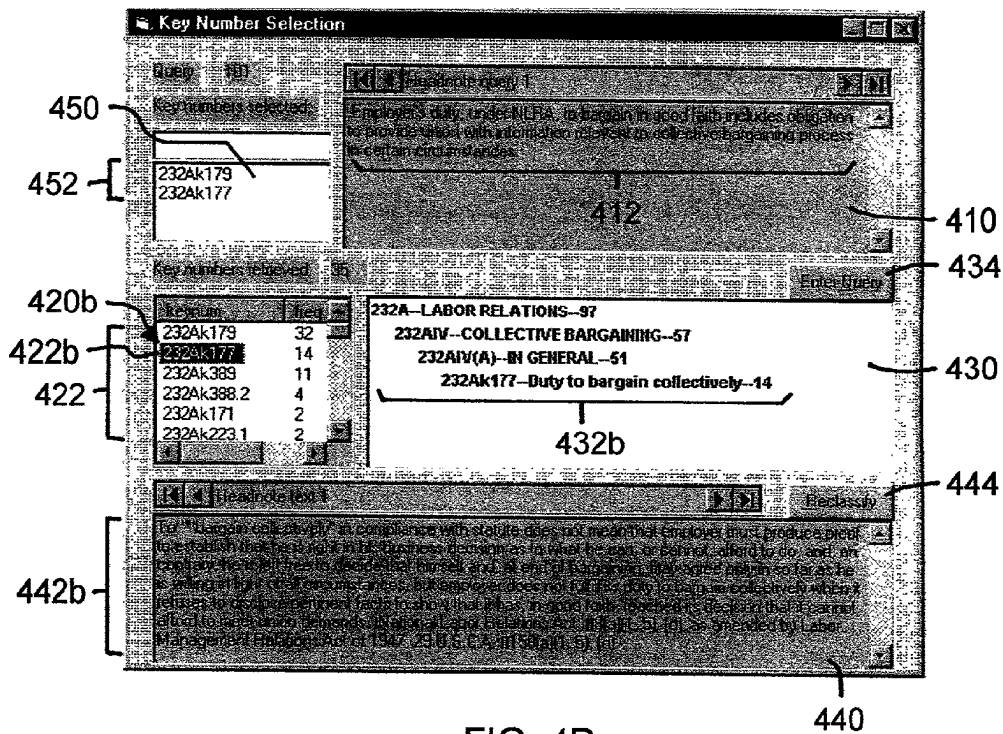


FIG. 4B

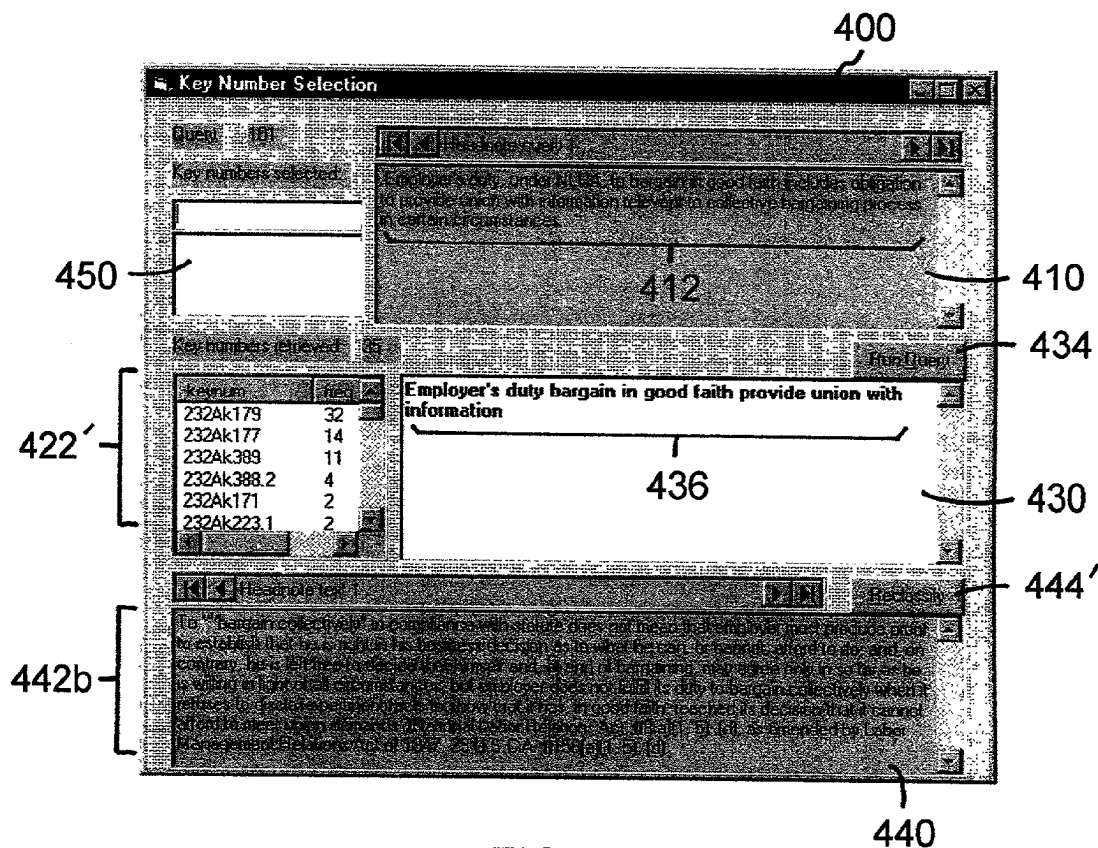


FIG. 4C

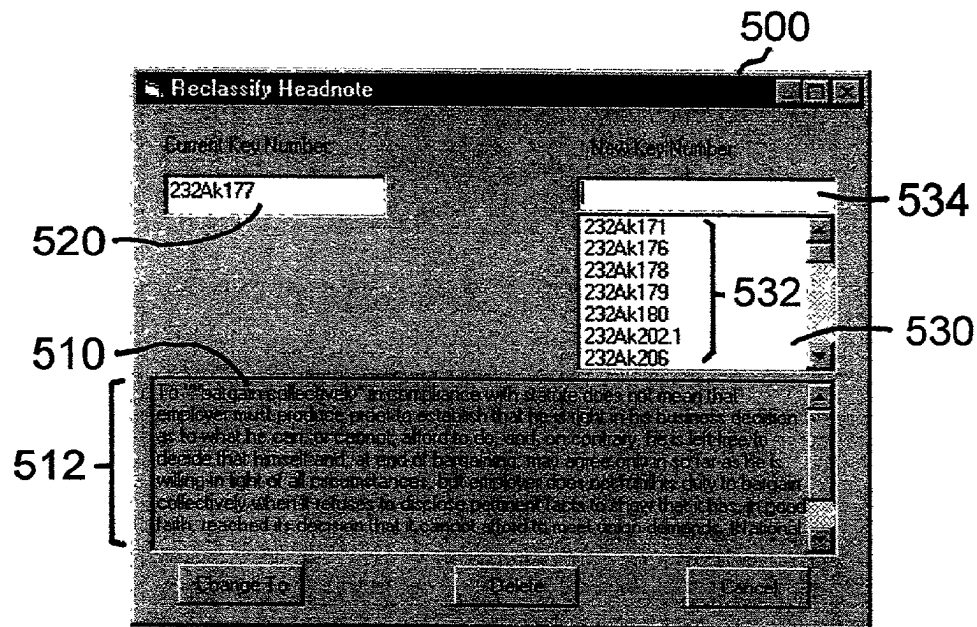


FIG. 5

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**DOCUMENT-CLASSIFICATION SYSTEM,
METHOD AND SOFTWARE****CROSS-REFERENCE TO RELATED
APPLICATIONS**

This application is a continuation of International Application No. PCT/US00/12386, filed May 5, 2000, which claims priority on U.S. provisional patent application 60/132673 which was filed May 5, 1999. Both applications are incorporated herein by reference.

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TECHNICAL FIELD

The present invention concerns document classification systems and methods for legal documents, such as judicial decisions.

BACKGROUND

The American legal system, as well as some other legal systems around the world, relies heavily on written judicial opinions—the written pronouncements of judges—to articulate or interpret the laws governing resolution of disputes. Each judicial opinion is not only important to resolving a particular dispute, but also to resolving all similar disputes in the future. This importance reflects the principle of American law that the judges within a given jurisdiction should decide disputes with similar factual circumstances in similar ways. Because of this principle, judges and lawyers within the American legal system are continually searching an ever-expanding body of past decisions, or case law, for the decisions that are most relevant to resolution of particular disputes.

To facilitate this effort, companies, such as West Group (formerly West Publishing Company) of St. Paul, Minn., not only collect and publish the judicial opinions of jurisdictions from almost every federal and state jurisdiction in the United States, but also classify the opinions based on the principles or points of law they contain. West Group, for example, classifies judicial opinions using its proprietary Key Number™ System. (Key Number is a trademark of West Group.) This system has been a seminal tool for finding relevant judicial opinions since the turn of the century.

The Key Number System is a hierarchical system of over 400 major legal topics, with the topics divided into subtopics, the subtopics into sub-subtopics, and so on. Each topic or sub-topic has a unique alpha-numeric code, known as its Key Number classification. Table 1 shows an example of a portion of the Key Number System for classifying points of divorce law:

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TABLE 1

Key Number hierarchy and corresponding Topic Descriptions

Key Number Classification	Topic Description
134	Divorce
134V	Alimony, Allowances, and Property Disposition
134k230	Permanent Alimony
134k235k	Discretion of Court

At present, there are approximately 82,000 Key Number classes or categories, each one delineating a particular legal concept.

Maintaining the Key Number System is an enormous on-going effort, requiring hundreds of professional editors to keep up with the thousands of judicial decisions issued throughout the United States ever year. Professional attorney-editors read each opinion and annotate it with individual abstracts, or headnotes, for each point of law it includes. The resulting annotated opinions are then passed in electronic form to classification editors, or classifiers, who read each headnote and manually assign it to one or more classes in the Key Number System. For example, a classifier facing the headnote: “Abuse of discretion in award of maintenance occurs only where no reasonable person would take view adopted by trial court assigned.” would most likely assign it to Key Number class 134k235, which as indicated in Table 1, corresponds to the Divorce subtopic “discretion of court”.

Every year, West Group classifiers manually classify over 350,000 headnotes across the approximately 82,000 separate classes of the Key Number classification system. Over time, many of the classifiers memorize significant portions of the Key Number System, enabling them to quickly assign Key Number classes to most headnotes they encounter. However, many headnotes are difficult to classify. For these, the classifier often invokes the WestLaw™ online legal search service, which allows the user to manually define queries against a database of classified headnotes. (WestLaw is a trademark of West Group.)

For instance, if presented with the exemplary “abuse of discretion” headnote, an editor might define and run a query including the terms “abuse,” “discretion,” “maintenance,” and “divorce.” The search service would return a set of annotated judicial opinions compliant with the query and the classifier would in turn sift through the headnotes in each judicial opinion, looking for those most similar to the headnote targeted for classification. If one or more of the headnotes satisfies the editor’s threshold for similarity, the classifier manually assigns the Key Number classes associated with these headnotes to the target headnote. The classifier, through invocation of a separate application, may also view an electronic document listing a portion of the Key Number System to help identify related classes that may not be included in the search results.

The present inventors recognized that this process of classification suffers from at least two problems. First, even with use of online searching, the process is quite cumbersome and inefficient. For example, editors are forced to switch from viewing a headnote in one application, to a separate online search application to manually enter queries and view search results, to yet another application to consult a classification system list before finally finishing classification of some hard-to-classify headnotes. Secondly, this conventional process of classification lacks an efficient method of correcting misclassified headnotes. To correct

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misclassified headnotes, a classifier makes a written request to a database administrator with rights to a master headnote database.

Accordingly, there is a need for systems, methods, and software that not only streamline manual classification processes, but also promote consistency and accuracy of resulting classifications.

SUMMARY

To address this and other needs, the inventors devised systems, methods, and software that facilitate the manual classification of documents, particularly judicial opinions according to a legal classification system, such as West Group's Key Number System. One exemplary system includes a personal computer or work station coupled to a memory storing classified judicial headnotes or abstracts and a memory containing one or more headnotes requiring classification. The personal computer includes a graphical user interface that concurrently displays one of the headnotes requiring classification, a list of one or more candidate classes for the one headnote, at least one classification description associated with one of the listed candidate classes, and at least one classified headnote that is associated with one of the listed candidate classes. The graphical user interface also facilitates user assignment of the one headnote requiring classification to one or more of the listed candidate classes.

In the exemplary system, the list of candidate classes results from automatically defining and executing a query against the classified headnotes, with the query derived from the one headnote requiring classification. The exemplary system also displays the candidate classes in a ranked order based on measured similarity of corresponding classified headnotes to the headnote requiring classification, further assisting the user in assigning the headnote to an appropriate class. Other features of the interface allow the user to reclassify a classified headnote and to define and execute an arbitrary query against the classified headnotes to further assist classification.

BRIEF DESCRIPTION OF DRAWINGS

FIG. 1 is a diagram of an exemplary classification system 100 embodying several aspects of the invention, including a unique graphical user interface 114;

FIG. 2 is a flowchart illustrating an exemplary method embodied in classification system 100 of FIG. 1;

FIG. 3 is a diagram illustrating an unclassified document or headnote 300 and a structured query 300' derived from headnote 300 during operation of classification system 100;

FIG. 4A is a facsimile of an exemplary graphical user interface 400 that forms a portion of classification system 100.

FIG. 4B is a facsimile of exemplary graphical user interface 400 after responding to a user input.

FIG. 4C is a facsimile of exemplary graphical user interface 400 after responding to another user input.

FIG. 5 is a facsimile of an exemplary graphical user interface 500.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

This description, which references and incorporates the Figures, describes one or more specific embodiments of one or more inventions. These embodiments, offered not to limit

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but only to exemplify and teach the one or more inventions, are shown and described in sufficient detail to enable those skilled in the art to implement or practice the invention. Thus, where appropriate to avoid obscuring the invention, the description may omit certain information known to those of skill in the art.

The description includes many terms with meanings derived from their usage in the art or from their use within the context of the description. However, as a further aid, the following term definitions are presented.

The term "document" refers to any logical collection or arrangement of machine-readable data having a file-name.

The term "database" includes any logical collection or arrangement of machine-readable documents.

FIG. 1 shows a diagram of an exemplary document classification system 100 for assisting editors in manually classifying electronic documents according to a document classification scheme. The exemplary embodiment assists in the classification of judicial abstracts, or headnotes, according to West Group's Key Number System. For further details on the Key Number System, see West's Analysis of American Law: Guide to the American Digest System, 2000 Edition, West Group, 1999. This text is incorporated herein by reference. However, the present invention is not limited to any particular type of documents or type of classification system.

System 100 includes an exemplary personal computer or classification work station 110, an exemplary classified documents database 120, an exemplary classification system database 130, and an unclassified documents database 140. Though the exemplary embodiment presents work station 110, and databases 120 140 as separate components, some embodiments combine the functionality of these components into a greater or lesser number of components. For example, one embodiment combines databases 120-140 within work station 110, and another embodiment combines database 130 with work station 110 and databases 120 and 140 into a single database.

The most pertinent features of work station 110 include a processing unit 111, a data-storage device 112, a display device 113, a graphical-user interface 114, and user-interface devices 115 and 116. In the exemplary embodiment, processor unit 111 includes one or more processors and an operating system which supports graphical-user interfaces. Storage device 112 include one or more electronic, magnetic, and/or optical memory devices. However, other embodiments of the invention, use other types and numbers of processors and data-storage devices. For examples, some embodiment implement one or more portions of system 100 using one or more mainframe computers or servers, such as the Sun Ultra 4000 server. Exemplary display devices include a color monitor and virtual-reality goggles, and exemplary user-interface devices include a keyboard, mouse, joystick, microphone, video camera, body-field sensors, and virtual-reality apparel, such as gloves, headbands, bodysuits, etc. Thus, the invention is not limited to any genus or species of computerized platforms.

Classified documents database 120 includes documents classified according to a classification system. In the exemplary embodiment, database 120 includes an indexed collection of approximately twenty million headnotes spanning the entirety of the West Group's Key Number System. However, some embodiments include an indexed subset of the total collection of classified headnotes. For example, one embodiment indexes headnotes from decisions made within the last 25 years. This reduces the number of headnotes by

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about half and thus reduces the time necessary to run queries against the the headnotes. Other embodiments further reduce the size of the training collection to include only headnotes specific to the jurisdiction of the query. This is expected not only to result in retrieval of headnotes with greater similarity, but also to further reduce processing time. Each headnote in the training collection has one or more logically associated Key Number classification codes.

An exemplary indexing procedure entails tokenizing the headnotes, generating transactions, and creating an inverted file. Tokenization entails reading in documents and removing predetermined stop-words, single digits, and stems. The exemplary embodiment uses the Porter stemming algorithm to remove stems. See, M. F. Porter, An Algorithm for Suffix Stripping, Program, 14(3):130-137, July 1980. Single digits are removed since they tend to appear as item markers in enumerations and thus contribute very little to the substance of headnotes.

After tokenization, the procedure generates a transactions for each headnote. A transaction is a tuple grouping a term *t*, a document identifier *n*, the frequency of the term *t* in the document *n*, and the positions of the term *t* in document *n*. Next, the procedure creates an inverted file containing records. The records store the term, the number of documents in the collection that contain the term, and the generated transactions. The inverted file allows efficient access to term information at search time. For further details, see G. Salton, Automatic Text Processing: the Transformation, Analysis and Retrieval of Information by Computer, Addison Wesley, 1989.

In addition to an indexed collection of headnotes, database 120 also includes a search engine 121. In the exemplary embodiment, search engine 121 comprises a natural-language search engine, such as the natural language version of Westlaw® legal search tools. However, other embodiments include other search engines based on the work by H. Turtle, Inference Networks for Document Retrieval, PhD thesis, Computer and Information Science Department, University of Massachusetts, October 1990. Still other embodiments use an Inquiry Retrieval System as described in J. P. Gallan, W. B. Croft, and S. M. Harding, The Inquiry Retrieval System. In Proceedings of the Third International Conference on Database and Expert Systems Applications, pages 78-83, Valencia, Spain, 1992. Springer-Verlag. 82,000 classes of West Group's Key Number System. Each class description includes its Key Number code, a topic description, and data linking the class to adjacent classes.

Unclassified documents database 140 includes a set of one or more unclassified documents. In the exemplary embodiment, each document is an unclassified headnote or more generally a headnote requiring initial classification or reclassification. Moreover, each headnote has a corresponding judicial opinion. In the exemplary embodiment, the headnotes are determined manually by professional editor. However, other embodiments may determine headnotes automatically using a computerized document or text summarizer. See for example U.S. Pat. No. 5,708,825 to Bernardo Rafael Sotomayer, which is incorporated herein by reference.

System 100 also includes, within data-storage device 112, classification-aiding software 112a. In the exemplary embodiment, software 112a comprises one or more software modules and operates as a separate application program or as part of the kernel or shell of an operating system. (Software 112a can be installed on work station 110 through a network-download or through a computer-readable medium, such as an optical or magnetic disc, or through

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other software transfer methods.) In the exemplary embodiment, software 112a enables system 100 to generate graphical-user interface 114 which integrates unclassified headnotes from database 140 with classified headnotes and ranked candidate classes from database 120 and classification system data from database 130 to assist users in manually classifying or reclassifying headnotes.

FIG. 2 shows a flow chart 200 of an exemplary classification method at least partly embodied within and facilitated by software 112a. Flow chart 200 includes a number of process blocks 202-214, which are arranged serially in the exemplary embodiment. However, other embodiments of the invention may reorder the blocks, omits one or more blocks, and/or execute two or more blocks in parallel using multiple processors or a single processor organized as two or more virtual machines or subprocessors. Moreover, still other embodiments implement the blocks as one or more specific interconnected hardware or integrated-circuit modules with related control and data signals communicated between and through the modules. Thus, the exemplary process flow is applicable to software, firmware, and hardware implementations.

The exemplary method begins at process block 202 with automatic or user-directed retrieval of a set of one or more unclassified headnotes from unclassified document database 140. For system embodiments that include two or more classification work stations, a number of sets of unclassified headnotes can be scheduled for classification at particular stations or a set of unclassified headnotes can be queued for sequential distribution to the next available work station. Some embodiments allow the user to define and run a query against the unclassified headnotes and in effect define the set of headnotes he or she will classify or alternatively transfer the set of headnotes to another work station for classification. After retrieval of the unclassified headnotes, execution of the exemplary method then proceeds to block 204.

Block 204 entails defining a query based on one of the headnotes in the set of unclassified headnotes. In the exemplary embodiment, this entails forwarding the one headnote to the natural-language search engine 121 which automatically defines the query using the indexing procedure already applied to index the classified headnotes of database 120. FIG. 3 shows the text of a sample headnote 300 and a structured query 300' that search engine 121 derives from it. Although the exemplary embodiment relied on the inherent functionality of its search engine 121 for this query definition some embodiments include a query structuring or definition module within software 112a.

After defining the query, the exemplary method runs, or executes, the query against the classified document database 120, as indicated in block 206. In the exemplary embodiment, search engine 121, which has already defined the query from the unclassified headnote, executes a search based on the query. In executing the search, search engine 121 implements memory-based reasoning, a variant of a k-nearest neighbor method. This generally entails retrieving the classified headnotes that are closest to the unclassified headnote, or more precisely the query form of the unclassified headnote, based on some distance function. More particularly, the exemplary embodiment compares the query to each classified headnote in the database, scores all the terms, or concepts, that each classified headnote has in common with the query, sums the scores of all the common terms, and divides by the total number of query terms in the classified headnote to determine an average score for the classified headnote.

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In the exemplary embodiment, search engine 121 scores individual terms using the following formula:

$$w(t,d)=0.4+0.6*tf(t,d)*idf(t),$$

where $w(t,d)$ denotes the weight, or score, for term t in document (or headnote) d ; $idf(t)$ denotes an inverse-document-frequency factor for the term t and $tf(t,d)$ denotes the term-frequency factor for term t in document d . The inverse-document-frequency factor $idf(t)$ is defined as

$$idf(t)=(\log(N)-\log[df(t)])/\log(N),$$

and the term-frequency factor $tf(t,d)$ for term t in document d is defined as

$$tf(t,d)=0.5+0.5\times\log[f(t,d)]/\log(\max tf),$$

where N is the total number of documents (headnotes) in the collection, $df(t)$ is the number of documents where term t appears, $f(t,d)$ is the number of occurrences of term t in document d , and $\max tf$ is the maximum frequency of any term in document d . The inverse-document-frequency factor (idf) favors (that is, gives greater weight to) terms that are rare in the collection, while the term frequency factor (tf) gives a higher importance to terms that are frequent in the document being scored.

The result of the search is a ranked list of document-score pairs, with each score indicating the similarity between a retrieved classified document and the query. The score is the metric for finding the nearest neighbors. Execution of the method then continues to block 208.

Block 208 entails determining the classes associated with a predetermined number k of the top classified headnotes from the ranked list of search results. The k classified headnotes are the k nearest neighbors of the unclassified headnote according to the distance function used in search engine 121. Exemplary values for k include 5, 10, 25, 50, and 100. In the exemplary embodiment, some of the classified headnotes have two or more associated Key Number classes.

After determining all the classes associated with the k classified headnotes most similar to the unclassified headnote, the method executes block 210 which entails transferring the k classified headnotes and their associated class identifiers from classified document database 120 to work station 110.

As block 212 shows, the station 110, or more particular processor unit 111, next determines a ranking for the class identifiers (Key Number classes) associated with the top k classified headnotes. The exemplary embodiment ranks the class identifiers based on their frequencies of occurrence within the set of candidate classes. In other words, each class identifier is ranked based on how many times it appears in the set of candidate classes.

Other embodiments rank the classes based on respective total similarity scores. For a given candidate class, the total similarity score is the sum of the similarity scores for all the headnotes associated with the class. Some embodiments rank the similarity scores for all the headnotes associated with a class, weight the ranks according to a function, and then sum the weighted ranks to determine where to rank the class. Two exemplary rank-weighting functions are:

$$w(r)=1/r \text{ and}$$

$$w(r)=(1-\epsilon^{\#r}),$$

where w denotes the weight function and r denotes rank. $\epsilon=1/(k+1)$, k being the number of nearest neighbors. Func-

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tions such as these give a higher weight to a Key Number class assigned to a document at the top of the retrieved set, and a lower weight when the document is at a lower position.

After ranking the candidate classes, the system executes block 214 which entails displaying on display device 113 (shown in FIG. 1) the exemplary graphical user interface 400 which is shown in FIG. 4A. Graphical user interface 400 includes concurrently displayed windows or regions 410, 420, 430, 440, and 450.

Window 410 displays the one unclassified headnote, headnote 300 of FIG. 3, which was selected or retrieved from classification in block 202 of the exemplary flow chart in FIG. 2. Window 420 displays a sorted list or table 422 of candidate classes and their corresponding frequencies. A class 422a in list 422 is highlighted in subregion 420a of window 420. Window 430 displays a portion 432a of the classification system hierarchy which includes class 422a. Window 440 displays one or more of the classified headnotes that is similar to the one unclassified headnote and which has class 422a as one of its assigned classes. Window 450 is an input window for assigning one or more classes to unclassified headnote 412 displayed in window 410.

In operation, interface devices 114 116 of system 100 enable a user to highlight or select one or more of the candidate classes in list 422. For example, a user may point and double click on candidate class 422a (232Ak179) to select the class, or a user may single click on the class to highlight it for further consideration. Selecting, or double-clicking, a class in the list, results in automatic insertion of the class into window 450. The interface not only allows the user to select as many of the classes as desired, but also to manually insert one or more classes, including classes not listed, into window 450. When interface 400 is closed, it prompts the user to save, or in effect, actually assign the one or more classes in window 450 to the headnote in window 410. In response to highlighting class 422a, interface 400 displays subregion 420a of window 420 in reverse-video, that is, by reversing the background and foreground colors of subregion 420a. (Other embodiments use other techniques not only to indicate selection of one of the classes, but also to select one or more of the classes.)

In further response to highlighting a class in list 422 of window 420, classification station 110 (in FIG. 1) defines a query based on all or a portion of the highlighted class and runs it against classification system database 130. Database 130 returns one or more classes in the neighborhood of the selected class to station 110, and window 430 displays one or more of these neighborhood classes, as portion 432a, allowing the user to view the highlighted class in context of the classification system, complete with class identifiers and class descriptors.

In addition to responding to highlighting of class 422a by displaying it in context of the classification system in window 430, the interface also displays in window 440 one or more of the classified headnotes that is similar to the headnote being classified. In other words, window 440 displays one of the headnotes, such as headnote 442a, which resulted in the highlighted class 422a being included in list 422. If there are more than one of these headnotes, window 440 allows the user to view each of them in order from most similar to least similar to the headnote being classified.

FIG. 4B shows that the user may also highlight another class, such as class 422b in the list 422 to view this class in context of the classification system in window 430 and to

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view the classified headnotes associated with the class in window 440. More specifically, window 430 shows a portion 432b of the classification system stored in database 130, and window 440 shows a headnote 442b associated with highlighted class 422b. The interface allows the user to repeat this process with each of the classes in list.

Window 430 also includes an enter-query button 434 which the user may invoke to convert window 430 into a query-entry window 430' as shown in FIG. 4C. This figure shows an exemplary query 436, which the user has defined to include several terms and/or phrases from or related to unclassified headnote 412 in window 410. The figure also shows that enter-query button 434 has been converted to a run-query button 434', which the user may actuate after entering query 436. Actuating the run-query button runs the query against classified documents database 120, and results in representation of interface 400, with an updated list 422' of candidate classes for possible assignment to the unclassified headnote. (Once the user highlights one of the classes in the updated list 422', window 430 will display this class in context of the classification system hierarchy. This user-invokable option of defining and running queries further facilitates classification of headnotes when the candidate classes stemming from the automatically defined queries are unsatisfactory.

When viewing the classified headnotes in window 440, the user may recognize that a particular headnote has been misclassified and thus require reclassification. Thus, window 440 includes a reclassification button 444, which the user can invoke to initiate reclassification of the particular headnote, such as headnote 442b to another class. Invocation of button 444 results in display of window 500 as shown in FIG. 5.

Window 500 includes a region 510 that displays a headnote 512 that is being reclassified, a region 520 which displays the highlighted class from list 422 that is associated with the headnote, and region 530 displays a ranked list 532 of candidate classes and an input field 534 for entry of new class. Ranked list 532 is developed using the same process used for developing list 422.

CONCLUSION

In furtherance of the art, the inventors have presented exemplary systems, methods, and software that facilitate the manual classification of documents, particularly judicial headnotes according to a legal classification system, such as West Group's Key Number System. One exemplary system includes a single graphical user interface that concurrently displays one of the headnotes requiring classification, a list of one or more candidate classes for the one headnote, at least one classification description associated with one of the listed candidate classes, and at least one classified headnote that is associated with one of the listed candidate classes. The exemplary interface integrates two or more tools necessary for a user to accurately and efficiently classify judicial headnotes or other documents.

The embodiments described above are intended only to illustrate and teach one or more ways of practicing or implementing the present invention, not to restrict its breadth or scope. The actual scope of the invention, which embraces all ways of practicing or implementing the concepts of the invention, is defined only by the following claims and their equivalents.

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The invention claimed is:

1. A method of classifying one or more documents in a classification scheme including two or more classes, with each class having one or more classified document summaries, the method comprising:
 - summarizing a particular document to define a particular document summary;
 - automatically generating a list of one or more of the classes, with each listed class having one or more classified document summaries which are similar to the particular document summary, wherein generating a list of one or more of the classes comprises:
 - defining one or more natural-language or boolean queries based on the particular document summary;
 - performing one or more searches of the classified document summaries based on one or more of the queries, with one or more of the searches yielding one or more found document summaries;
 - ranking the one or more found document summaries based on relative similarity to the particular document summary to define one or more ranked document summaries; and
 - generating the list based on one or more of the ranked document summaries; and
 - classifying the particular document based on the list of classes.
2. A method of classifying one or more documents in a classification scheme including two or more classes, with each class having one or more classified document summaries, the method comprising:
 - summarizing a particular document to define a particular document summary;
 - automatically generating a list of one or more of the classes, with each listed class having one or more classified document summaries which are similar to the particular document summary, wherein generating a list of one or more of the classes comprises:
 - defining one or more natural-language or boolean queries based on the particular document summary;
 - performing one or more searches of the classified document summaries based on one or more of the queries, with one or more of the searches yielding one or more found document summaries;
 - ranking the one or more found document summaries based on relative similarity to the particular document summary to define one or more ranked document summaries; and
 - generating the list based on one or more of the ranked document summaries; and
 - classifying the particular document based on the list of classes, wherein classifying the particular document based on the list of classes comprises manually selecting one or more of the classes using a graphical user interface or automatically selecting one or more of the classes using a predetermined selection procedure.
3. The method of claim 2, wherein:
 - summarizing comprises a step for summarizing a particular document to define a particular document summary;
 - automatically generating comprises a step for automatically generating a ranked list of one or more of the classes, with each listed class having one or more classified document summaries which are similar to the particular document summary; and
 - classifying comprises a step for classifying the particular document based on the list of classes.
4. The method of claim 2, wherein summarizing a particular document comprises manually summarizing the par-

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particular document or electronically summarizing the particular document using a computerized document summarizer.

5. A method of classifying one or more documents, comprising

providing a classification scheme including two or more classes, with each class having one or more classified document summaries logically associated with it;

summarizing a particular document to define a particular document summary;

automatically generating a list of one or more of the classes, with each listed class having one or more classified document summaries which are similar to the particular document summary, wherein generating a list of one or more of the classes comprises:

defining one or more natural-language or boolean queries based on the particular document summary;

performing one or more searches of the classified document summaries based on one or more of the queries, with one or more of the searches yielding one or more found document summaries;

ranking the one or more found document summaries based on relative similarity to the particular document summary to define one or more ranked document summaries; and

generating the list based on one or more of the ranked document summaries; and

classifying the particular document based on the list of classes.

6. A method of classifying one or more documents, comprising

providing a classification scheme including two or more classes, with each class having one or more classified document summaries logically associated with it;

summarizing a particular document to define a particular document summary;

automatically generating a list of one or more of the classes, with each listed class having one or more classified document summaries which are similar to the particular document summary;

classifying the particular document based on the list of classes; and

adding one or more classes to the classification scheme, with each added class having one or more classified document summaries logically associated with it.

7. The method of claim 6, wherein each class has an associated legal concept and the particular document is a judicial opinion or secondary legal source.

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8. The method of claim 6, wherein the classification scheme conforms at least in part with a version of the West Key Numbering System.

9. A computer-readable magnetic, electronic, or optical medium comprising computer-executable instructions for:

causing a computer to read at least part of a classification scheme into memory, the classification scheme including two or more classes with each class having one or more classified document summaries logically associated with it;

causing the computer to summarize in memory a particular document to define a particular document summary;

causing the computer to generate a list in memory of one or more of the classes, with each listed class having associated with it one or more classified document summaries which are similar to the particular document summary, wherein the instructions for generating a list of one or more of the classes comprises instructions for:

causing the computer to define one or more natural-language or boolean queries based on the particular document summary;

causing the computer to perform one or more searches of the classified document summaries based on one or more of the queries, with one or more of the searches yielding one or more found document summaries;

causing the computer to rank the one or more found document summaries based on relative similarity to the particular document summary to define one or more ranked document summaries; and

causing the computer to generate the list based on one or more of the ranked document summaries; and

causing the computer to classify the particular document based on the list of classes.

10. The medium of claim 9, further comprising computer-executable instructions for:

causing the computer to request manual input for adding or to automatically add one or more classes to the classification scheme, with each added class having one or more classified document summaries logically associated with it.

11. The medium of claim 9, wherein the classification scheme conforms at least in part with a version of the West Key Numbering System.

* * * * *

EXHIBIT 32

Message

From: Augustin, Scott (TR Communications) [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=EE6E1EC82EE14DB98F56AB2EEF0240A9-0012710]
Sent: 3/5/2021 8:13:30 AM
To: Fenne, Christine K. (TR Product) [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=01187e6c2649418d82c8fe1f00c4ad5e-0043127]; Hurwitz, Joel (TR Product) [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=999eb3d6b21a4e11a58428094f95047d-0067085]; Elstad, John R. (Content Operations) [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a732fe6bfbdf4cd989cbfba05cfab825-0058522]; Dahn, Mike (TR Product) [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=ea2c03de73614795928da810d28b087f-0014130]; Lindberg, Erik (TR Product) [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=517c6b47b5c347e6982b30aa9a9b806e-0002455]; Martens, Andrew (TR Product) [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=87279f712b60421f8b87a33940f9c0b4-0016383]; Blanchfield, Leann V. (TR Product) [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=f85df6f4a297445a906420fbca51e7d6-0009182]; Willhite, Jeff (TR Product) [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=48dfcb6c680c43c2bd40bbd62c1139ff-0018637]; Leighton, Thomas (Content Operations) [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=7316f5e65d1a40ab9ac042356dc8b5ba-0061019]
CC: Kusnierek, Jackie (Content Operations) [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0f22baff5ef4b999d032eee2cff2efb-0018555]
Subject: RE: Attorney Editors and Editorial facts

Awesome. Thanks, Chris.

From: Fenne, Christine K. (TR Product) <chris.fenne@thomsonreuters.com>
Sent: Thursday, March 4, 2021 7:52 PM
To: Hurwitz, Joel (TR Product) <joel.hurwitz@thomsonreuters.com>; Augustin, Scott (TR Communications) <scott.augustin@thomsonreuters.com>; Elstad, John R. (Content Operations) <john.elstad@thomsonreuters.com>; Dahn, Mike (TR Product) <mike.dahn@thomsonreuters.com>; Lindberg, Erik (TR Product) <erik.lindberg@thomsonreuters.com>; Martens, Andrew (TR Product) <andrew.martens@thomsonreuters.com>; Blanchfield, Leann V. (TR Product) <leann.blanchfield@thomsonreuters.com>; Willhite, Jeff (TR Product) <jeffrey.willhite@thomsonreuters.com>; Leighton, Thomas (Content Operations) <tom.leighton@thomsonreuters.com>
Cc: Kusnierek, Jackie (Content Operations) <jackie.kusnierek@thomsonreuters.com>
Subject: RE: Attorney Editors and Editorial facts

Scott,

I'll work with Judicial Editorial on the cases portion

From: Hurwitz, Joel (TR Product) <joel.hurwitz@thomsonreuters.com>
Sent: Thursday, March 4, 2021 6:53 PM
To: Augustin, Scott (TR Communications) <scott.augustin@thomsonreuters.com>; Elstad, John R. (Content Operations) <john.elstad@thomsonreuters.com>; Dahn, Mike (TR Product) <mike.dahn@thomsonreuters.com>; Lindberg, Erik (TR Product) <erik.lindberg@thomsonreuters.com>; Martens, Andrew (TR Product) <andrew.martens@thomsonreuters.com>; Blanchfield, Leann V. (TR Product) <leann.blanchfield@thomsonreuters.com>; Fenne, Christine K. (TR Product) <chris.fenne@thomsonreuters.com>; Willhite, Jeff (TR Product) <jeffrey.willhite@thomsonreuters.com>; Leighton, Thomas (Content Operations) <tom.leighton@thomsonreuters.com>

Cc: Kusnierek, Jackie (Content Operations) <jackie.kusnierek@thomsonreuters.com>

Subject: RE: Attorney Editors and Editorial facts

Scott,

I reviewed the highlighted text that applies to statutes and it all looks accurate. I've changed the highlighting to yellow on the text that I reviewed. Someone from Cases will have to review the rest.

Joel

From: Augustin, Scott (TR Communications) <scott.augustin@thomsonreuters.com>

Sent: Thursday, March 4, 2021 5:17 PM

To: Elstad, John R. (Content Operations) <john.elstad@thomsonreuters.com>; Dahn, Mike (TR Product) <mike.dahn@thomsonreuters.com>; Lindberg, Erik (TR Product) <erik.lindberg@thomsonreuters.com>; Martens, Andrew (TR Product) <andrew.martens@thomsonreuters.com>; Blanchfield, Leann V. (TR Product) <leann.blanchfield@thomsonreuters.com>; Hurwitz, Joel (TR Product) <joel.hurwitz@thomsonreuters.com>; Fenne, Christine K. (TR Product) <chris.fenne@thomsonreuters.com>; Willhite, Jeff (TR Product) <jeffrey.willhite@thomsonreuters.com>; Leighton, Thomas (Content Operations) <tom.leighton@thomsonreuters.com>

Cc: Kusnierek, Jackie (Content Operations) <jackie.kusnierek@thomsonreuters.com>

Subject: Re: Attorney Editors and Editorial facts

You guys are the best. Thanks.

From: Elstad, John R. (Content Operations) <john.elstad@thomsonreuters.com>

Sent: Thursday, March 4, 2021 5:09:53 PM

To: Dahn, Mike (TR Product) <mike.dahn@thomsonreuters.com>; Augustin, Scott (TR Communications) <scott.augustin@thomsonreuters.com>; Lindberg, Erik (TR Product) <erik.lindberg@thomsonreuters.com>; Martens, Andrew (TR Product) <andrew.martens@thomsonreuters.com>; Blanchfield, Leann V. (TR Product) <leann.blanchfield@thomsonreuters.com>; Hurwitz, Joel (TR Product) <joel.hurwitz@thomsonreuters.com>; Fenne, Christine K. (TR Product) <chris.fenne@thomsonreuters.com>; Willhite, Jeff (TR Product) <jeffrey.willhite@thomsonreuters.com>; Leighton, Thomas (Content Operations) <tom.leighton@thomsonreuters.com>

Cc: Kusnierek, Jackie (Content Operations) <jackie.kusnierek@thomsonreuters.com>

Subject: RE: Attorney Editors and Editorial facts

+Jackie

From: Dahn, Mike (TR Product) <mike.dahn@thomsonreuters.com>

Sent: Thursday, March 4, 2021 4:56 PM

To: Augustin, Scott (TR Communications) <scott.augustin@thomsonreuters.com>; Lindberg, Erik (TR Product) <erik.lindberg@thomsonreuters.com>; Martens, Andrew (TR Product) <andrew.martens@thomsonreuters.com>; Blanchfield, Leann V. (TR Product) <leann.blanchfield@thomsonreuters.com>; Hurwitz, Joel (TR Product) <joel.hurwitz@thomsonreuters.com>; Fenne, Christine K. (TR Product) <chris.fenne@thomsonreuters.com>; Willhite, Jeff (TR Product) <jeffrey.willhite@thomsonreuters.com>; Elstad, John R. (Content Operations) <john.elstad@thomsonreuters.com>; Leighton, Thomas (Content Operations) <tom.leighton@thomsonreuters.com>

Subject: Re: Attorney Editors and Editorial facts

Looping in Leann and John and key members of their teams. They'll know.

Mike

From: Augustin, Scott (TR Communications) <scott.augustin@thomsonreuters.com>
Sent: Thursday, March 4, 2021 3:44 PM
To: Lindberg, Erik (TR Product) <erik.lindberg@thomsonreuters.com>; Dahn, Mike (TR Product) <mike.dahn@thomsonreuters.com>; Martens, Andrew (TR Product) <andrew.martens@thomsonreuters.com>
Cc: Augustin, Scott (TR Communications) <scott.augustin@thomsonreuters.com>
Subject: Attorney Editors and Editorial facts

Hi, gents

A few years ago, Mike sent the below as part of a packet of information to Jean O'Grady. We used it again to inform our talking points for Project Hawley.

Our friends in Corporate Affairs are creating narratives for each of the segments for our leaders to use to background for external opportunities – remarks, interviews, etc.

There are some great facts here about our editorial value add and how they are created.

Is there someone on your team who could run through the highlighted and update, if needed?

Also, do we know how many attorney editors we have? Practical Law says they have 600 globally. Not sure if they are counting some of the Westlaw folks in that number.

Holler with questions.

Scott

- **Very timely access to the law.** We load United States Supreme Court decisions within minutes and most other reported decisions within a business day of their electronic receipt, often within hours. We load pending legislation within 4-8 hours on average.
 - **Give researchers confidence that the law they're reading in print or on Westlaw Classic/WestlawNext is accurate authority.** We make tens of thousands of case corrections every year, and we believe we're the only major research provider to provide bad law / legal issue warning symbols for both state and federal regulations.
 - **Provide researchers with a better understanding of the law.** We do this by pulling the right collections of materials together in our taxonomy (The Key Number System), our citator (KeyCite), and by providing a comprehensive world-class collection of secondary sources, like ALR, AmJur, Corpus Juris Secundum, Causes of Action, the complete Restatements, Rutter guides, and Witkin treatises.
 - **Help researchers find the law quickly and efficiently.** Proprietary indexes, editorially-enhanced citation networks, and the largest, most refined taxonomy of U.S. law in the world all help researchers find the law they need quickly and efficiently. And, the WestSearch engine in WestlawNext automates the process of using these editorial tools so that researchers can find what they're looking for quickly, even if they don't know the precise phrasing of the law.
- Each year, we gather hundreds of thousands of opinions both electronically and in hard copy from 600 courts and 3,500 judges across the United States. We have hundreds of licensed attorney-editors on staff. On average, they have more than 10 years of experience in the profession. They receive intensive training, and their work is continuously checked for accuracy and readability. The majority of our attorney-editors graduated from top 25 law schools or were in the top of their law school class.

Our editors are grouped into one of four teams:

- **Case Law Attorney-Editors** – Headnote writers are dedicated to capturing clear and concise points of law, and Headnote classifiers are closely aligned with a specific practice area so they know their assigned area of law inside and out.
- **Statutes Attorney-Editors** – They are aligned with specific jurisdictions in order to master the unique nomenclature and style of various state legislatures, and the overall legislative process. They are dedicated to ensuring our presentation of the law is accurate and timely, and they develop and/or classify annotations for statutes and regulations.
- **Secondary Sources Attorney-Editors** – They are dedicated to the analysis of law provided in our encyclopedic and treatise materials, as well as the editorial and legal subject matter management of our 3000+ expert authors.
- **KeyCite Analysts** – They are dedicated to keeping KeyCite the most complete, accurate and up-to-the-minute citation service.

We use rigorous 22-step editorial processes to provide researchers with accurate statutes and case law. These steps include the creation of KeyCite, Key Number System, and headnote features, Notes of Decisions classification, index reference creation and the creation of editorial notes to highlight ballot measures, conflicting amendments, and provisions held unconstitutional. Within minutes of acquiring a law or capturing an opinion, a team of our publishing specialists and attorney-editors is hard at work making the statute or case more accurate, more relevant, easier to understand, and easier to find.

Working closely with the legislatures and the courts, our attorney-editors make sure that laws are correctly integrated and that court opinions are factually and legally correct, as well as free of typos and misspellings. On a yearly basis, attorney-editors manage changes to more than 100,000 statute sections, classify more than 200,000 Notes of Decisions into the statutes, manage a collection of more than 20,000,000 index references, create over 400,000 headnotes, assign over 550,000 Key Numbers (over 2,000 Key Numbers per day), and make tens of thousands of corrections. This editorial process enables researchers to have the most relevant, accurate and current authority available.

Our comprehensive 22-step editorial process includes:

- **West Key Number System®** : With more than 400 topics and 98,000 points of law, it's the de facto classification system for all American law, widely regarded as the cornerstone of effective legal research.
- **Headnotes**: Our attorney-editors craft a headnote for every specific point of law covered in every reported opinion.
- **Case Synopses**: Our attorney-editors provide a summary of each case to help researchers quickly decide if it's on point. It includes the background, holdings, and the judge's decision. **Added Search Terms**: Our attorney-editors add synonyms, acronyms, terms of art, generic names, and legal relationships – so search terms don't have to match the judge's terms verbatim.
- **Court Corrections**: Our attorney-editors work closely with the courts to identify and correct errors ranging from incorrect citations and misspellings to substantive factual and legal inaccuracies.
- **KeyCite**: The most complete, accurate, up-to-the-minute citation service identifies direct history and precedential changes within 24 hours.
- **Annotations and Indexes for Statutes and Regulations**: Our notes of decisions (statute annotations) provide brief summaries of the important cases that interpret a statute. Also, with more than 20 million references categorized by topic, Westlaw Classic/WestlawNext's online indexes provide quick links to the most relevant statutes and regulations, without having to run a search.

No other legal information company puts court opinions through such a rigorous editorial process.

For over 125 years, our attorney-editors have been analyzing, categorizing, and summarizing the law as well as building tools to help researchers understand the law and find on-point materials quickly.

II. WEST KEY NUMBER SYSTEM

Considered the authoritative classification scheme for American case law, the West Topic and Key Number System has approximately 400 topics and about 98,000 classifiable Key Numbers. For over a century, West

Topic and Key Numbers have offered legal researchers a convenient way to home in on a particular legal issue and quickly find on-point cases, and it provides a means to connect cases to secondary materials, such as practice books, treatises, legal encyclopedias and statutory materials.

A. Comprehensive and precise

The Key Number System divides the universe of case law into topics (Civil Rights, Criminal Law, Patents, etc.). Each of those topics is then further sub-divided into individual points of law called Key Numbers. For example, in the topic Constitutional Law there is a sub-development (XVIII) called Freedom of Speech, Expression, and Press. Within that sub-development there is a further sub-development called Prisons and Pretrial Detention. Within that sub-development there are thirty Key Numbers devoted to the various issues pertaining to free speech rights of prisoners and pretrial detainees.

C. Current and Accurate

We are always improving the Key Number System to keep pace with changes in the law. The classification system is dynamic and under constant review for improvements. Whenever a topic is deemed to be outdated, we devise a new set of Key Numbers for that topic. Our attorney-editors will then find every headnote in history that has been classified to that topic (even ones from cases in the 1700s and 1800s!) and assign an updated Key Number to them. Those headnotes are then reloaded to Westlaw Classic/WestlawNext. In 2011, we reclassified over 600,000 headnotes to updated Key Numbers.

Aside from complete overhauls of a topic, our attorney-editors also make small changes throughout the Key Number System when new legal issues arise and when a body of case law begins to emerge on a particular issue. Key Numbers are added and also renamed to better reflect their content. For example, in 2005, the topic Telecommunication was revised to include Key Numbers reflecting a new body of case law driven by changes in technology, such as 372k1320 Internet Service Providers.

We also update topics that have become outdated. For instance, Master & Servant was changed to Labor & Employment, and Trover & Conversion was changed to Conversion & Civil Theft.

III. HEADNOTES

Our attorney-editors craft a headnote for every specific point of law covered in every reported opinion. They create “abstract” headnotes which set forth the black letter principles of law as well as “concrete” headnotes which apply those principles of law to the facts of the case.

In a single concrete headnote, our attorney-editors may be synthesizing language from several paragraphs or several pages of an opinion. They pull relevant search terms into very close proximity when they might not appear in close proximity in the case. This enables researchers to find more on-point cases.

In the case of *Frye v. Hodges*, 2011 WL 6880719, for instance, our concrete headnote states:

35 Arrest 35II On Criminal Charges 35k68.1 Mode of Making Arrest 35k68.1(4) k. Use of Force.

Deputy sheriff had probable cause to believe that armed suspect posed imminent threat of serious physical harm or death to himself and suspect's girlfriend, warranting deputy sheriff's use of deadly force against suspect; officer was responding to anonymous 911 reports that shot had been fired at residence of suspect's girlfriend, officer heard arguments and sounds indicating active assault was in progress, girlfriend had bloody nose and pool of blood was on floor, suspect was holding snub-nosed revolver, officer instructed suspect to put revolver down at least 16 times, suspect and girlfriend continued exceptionally heated argument, suspect threatened that if girlfriend uttered one more word it would be the last she ever said, suspect fired revolver, and officer responded by instantaneously firing 12-13 quick shots at suspect, killing him. [U.S.C.A. Const.Amend. 4.](#)

Although the legal conclusion for this issue in the case appears in section II of the opinion, much of the headnote is drawn from the previous section of the opinion. The ability to include terms that are spread out over several paragraphs into one cogent headnote greatly assists the researcher who is searching for those terms together.

Moreover, our attorney-editors added abstract headnotes in this case which supported this concrete headnote, such as:

35 Arrest

35II On Criminal Charges

35k68.1 Mode of Making Arrest

35k68.1(4) k. Use of Force.

A police officer may employ deadly force where the officer has probable cause to believe that the suspect poses a threat of serious physical harm, either to the officer or to others. U.S.C.A. Const.Amend. 4.

In addition to cross references, law review references and similar tools, our attorney-editors examine all the headnotes from court decisions in their jurisdictions, and classify all relevant headnotes to the appropriate statutory sections.

In 2011, more than 800,000 headnotes were reviewed for possible inclusion in state and federal codes. The headnotes are divided into a logical structure for ease of use. These tools enable researchers to retrieve documents using terms not necessarily contained in the language of the statute itself.

IV. ADDED SEARCH TERMS

While reading a judicial opinion, our attorney-editors are not only analyzing the case and picking out the salient points of law, but they are also adding search terms which may not occur in the case. A court may only refer to parties by their proper names in the case, but attorney-editors identify that the case pertains to employment law. Rather than referring to the parties by name in the editorial enhancements, the attorneys will use descriptive, standardized terms like employer and employee. Adding those additional terms enables the researcher to retrieve more relevant cases on WestlawNext than from competitive services which do not add context-sensitive terms.

To illustrate how our attorney-editors add relevant search terms, see *Wickham v. Galetka*, 61 P.3d 978. In that case, the Utah Supreme Court answers the question of whether an attorney renders ineffective assistance by failing to call an alibi witness. The Court answers the question but never uses the term "alibi." Headnote 9 in *Wickham* uses the term "alibi."

110 Criminal Law 110XXXI Counsel 110XXXI(C) Adequacy of Representation 110XXXI(C)2 Particular Cases and Issues 110k1921 Introduction of and Objections to Evidence at Trial 110k1924 k. Presentation of Witnesses. Defense counsel's decision not to present alibi witness in prosecution for aggravated sexual assault was reasonable trial strategy, and therefore was not ineffective assistance; counsel was aware that witness was in police custody out of state awaiting extradition, but he made a tactical decision not to seek a continuance and go to trial immediately because state's medical expert was unavailable.

U.S.C.A. Const.Amend. 6.

A search for "alibi witness" finds this document on WestlawNext. However, a researcher would not find the document with a service that does not enhance case law with relevant added terms.

V. CORRECTIONS

Editorial rigor is also exhibited by the care our attorney-editors take in reading judicial opinions. While reading an opinion, our attorney-editors spot legal and factual inaccuracies within the opinion. A judge may have left out the word "not" which entirely changes the meaning of the case, confused the parties (writer of the opinion used "debtor" when "creditor" was intended), or come to the wrong legal conclusion (the court's opinion may indicate that the judge is ruling for the plaintiff, but the mandate states judgment is for the defendant).

For example, our attorney-editors caught errors in *Madrigal v. Mendoza*, 639 F.Supp.2d 1026, 2009 U.S. Dist. LEXIS 63500, D.Ariz., July 23, 2009 (NO. CV-06-2914-PHX-ROS). In *Madrigal*, the issue was whether expert testimony can be based on inadmissible hearsay. The Arizona federal district court opinion stated "admissible" when it meant "inadmissible. "Expert opinions may be based on otherwise admissible hearsay so long as the facts and data 'are of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject.'" This case is correct on WestlawClassic and WestlawNext. It is incorrect with many other service providers. The term inadmissible does not occur elsewhere in the case, so a search with the correct term is unlikely to retrieve this case with another service.

In *Tagger v. Astrue*, 536 F.Supp.2d 1170, 2008 U.S. Dist. LEXIS 57237 (C.D.Cal. Jan 24, 2008) (NO. CV 06-5250-RC), a California federal district court included an extraneous "not" in this statement regarding a claim for social security disability benefits: "Similarly, the ALJ erred in Step Two in failing to find plaintiff's psychotic disorder **is**

not a severe impairment." The court meant to say "the ALJ erred in Step Two in failing to find plaintiff's psychotic disorder **is** a severe impairment." The court made the correction in response to our query.

VI. KEYCITE

The last thing any attorney wants is to appear in court only to discover that a relied-on case has been reversed on appeal or overruled. KeyCite analysts ensure that Westlaw Classic and WestlawNext have prompt and accurate direct history.

They assign KeyCite references based on careful analysis of each individual case. Red or yellow flags are then assigned when appropriate so that a researcher will know whether the case is no longer good law for at least one of the points of law it contains. Red or yellow flags are also displayed adjacent to those documents in search result lists. Moreover, in WestlawNext, KeyCite flags are automatically updated in folders enabling the researcher to know immediately if previous research is still good law.

As an example, consider the 2011 United States Supreme Court case of *Erica P. John Fund, Inc. v. Halliburton Co.*, 131 S.Ct. 2179, 180 L.Ed.2d 24, an important case involving class certification in securities fraud litigation. That case abrogated the Fifth Circuit case *Oscar Private Equity Investments v. Allegiance Telecom, Inc.*, 487 F.3d 261. On Westlaw Classic and WestlawNext, the researcher who accesses *Oscar* is immediately notified by the presence of a red flag that that case is no longer good law. One click on the red flag reveals that the case was **abrogated** by *Erica P. John*.

The free web does not provide a good citator. On Google Scholar, a researcher can access *Oscar*, along with three lists of documents that have cited or are related to that case. However, it is not apparent from any of these lists that *Oscar* has been abrogated. A customer wanting to ascertain from Google Scholar alone whether *Oscar* is still good law might be required to sift through hundreds of documents. Even with other non-Google research services, it's not necessarily easy to ascertain what happened with the *Oscar* case.

This might seem like a small matter, but it's actually a big one. You can't ascertain whether a case or statute is good law on the free web, yet some lawyers are encouraged to use the free web to save costs. If you have to verify that what you've found is good law by going to Westlaw, how does that save the lawyer time or the client money?

Our attorney-editors also track changes to the code that result from elections. These changes that result from constitutional amendments, initiatives and referenda are quickly executed once the election results are certified. Our attorney-editors also include in the code material passed by the legislature but not classified into the code itself.

Having our attorney-editors actually read the law as it emerges and then take an integrated approach to keeping the law up-to-date really matters. For instance, all of the following statutes have been preempted or have other issues with them, but how would you know unless you were using Westlaw Classic/WestlawNext?

- § 112.108 of the Texas tax code
- § 11-27-2 of the Rhode Island statutes
- § 14105.192 of California's Welfare and Institutions Code
- § 775.082 of the Florida statutes
- § 90-21.85 of the North Carolina statutes

VII. ANNOTATIONS AND INDEXES

We have more than twenty attorney-editors employed to index state and federal codes, including the Code of Federal Regulations. Our attorney-editors are able to go beyond the four corners of the document to create index references based on state-specific popular names and concepts.

An example is an index reference in the District of Columbia Code index under the heading "lookism". The reference is to a law relating to discrimination by reason of personal appearance. Do a search for "lookism" in WestlawNext, and you get the right statute, even though the term does not appear in the statute. Another example is our index to the CFR. The CFR has over 40 sections about "Bovine Spongiform Encephalopathy," which is better known as "mad cow disease." However, the CFR never uses the term "mad cow disease," which can be a problem for researchers.

If you go to <http://www.gpo.gov/fdsys/> and click on advanced search to just search the CFR, and you search “mad cow disease” – you get no hits. If you use a research service without robust editorial enhancements for the CFR, you get very few hits. However, if you run this search on WestlawNext, you will get all the relevant sections because of our proprietary indexes.

With our indexes, we add terms all the time that don’t appear in the text of all of the relevant state and federal statute sections (like “lookism” above, or for the USC, “loansharking,” “meals on wheels,” or “no-bid contracts,” “single source contracts,” or “sole source contracts”). These entries not only help researchers doing manual book research find the right law, but they also help our search engine, WestSearch, find the right law quickly.

VIII. SECONDARY SOURCES

We also publish over 2,500 titles authored by practitioners, professors, judges and in-house editorial experts. This is the largest collection of legal analysis under single ownership, all of which is linked and cross-referenced in order to provide the most comprehensive research experience.

While there is a tremendous amount of information available on any subject, current, comprehensive and validated information written by experts is far less accessible. Our job is to find the best authors, work closely with them to develop the best information, and provide it in a format that our customers need.

Our attorney-editors review each manuscript with an eye to whether it satisfies **16** separate quality questions, or dimensions. These dimensions are based on our customer’s expectations for the information, and consist of the following:

- Is the information easily and quickly found and retrievable?
- Is it appropriate for the task at hand?
- Is it true and credible?
- Is it of sufficient breadth and depth for the task at hand – or is something missing?
- Is it concise?
- Is it in a consistent format or “voice”?
- Is it easy to manipulate (i.e. is accessible through various media)?
- Is it correct and reliable?
- Is the information in appropriate languages, symbols, and units, and the definitions clear?
- Is it unbiased, unprejudiced, and impartial?
- Is it applicable and helpful for the task at hand?
- Is it highly regarded in terms of its source or content?
- Is personal or private information restricted appropriately?
- Is it up-to-date?
- Is it understandable?
- Does the information provide the customer with an advantage from its use?

In addition to titles published by Thomson Reuters, we also make available hundreds of law reviews, bar journals, and CLE materials in Westlaw Classic/WestlawNext.

IX. THE EDITORIAL VALUE IN THE REAL-WORLD

The reality is that time is the new currency for legal professionals. All legal organizations are being asked to “do more with less” and control costs. But, compromising quality for costs can have disastrous implications – lack of confidence, an unhappy client and even worse, increased risk and loss of reputation.

To save researchers time and ensure they have accurate information they can rely on, the new search engine in WestlawNext, WestSearch, incorporates the 125-years worth of proprietary editorial enhancements described above with cutting-edge search technology to deliver the best results.

Even when a researcher chooses to just search in a single state jurisdiction, which is common, WestSearch automatically searches every case in every jurisdiction behind the scenes to find headnotes that match. The WestSearch algorithm then analyzes the Topic and Key Numbers that those headnotes are classified under and uses those common Key Numbers to help find on-point documents in the single state (or federal) jurisdiction. This is how WestSearch is able to retrieve legal concepts and relevant documents with phrasing different from your query.

For example, you are researching the “Vaughn Index” in Texas. A seminal case from the DC Circuit on the Freedom of Information Act is ***Vaughn v. Rosen*** (484 F.2d 820) which requires a government agency to detail why it is withholding documents from a public records request. The underlying document is sometimes called a “Vaughn index”.

In Texas, WestSearch retrieves relevant results about Texas’ public records law and what a custodian must do to justify nondisclosure of a public records request despite the fact that ***Vaughn*** has not been expressly adopted in Texas. Of the 865 total headnotes across the country that have the term “Vaughn index,” 553 of them are for key number 326k62 - Records; Public Access; General Statutory Disclosure

Requirements; Proceedings for Disclosure; In General; Request and Compliance. This search in Texas results in 22 cases, 12 of which have key number 326k62.

Another example is the feudal maxim “a man’s home is his castle,” which formed the basis of the defense of habitation and gave rise to the modern castle doctrine. In Pennsylvania, you won’t find any cases with the term “castle doctrine” in them. However searching “castle doctrine” in WestlawNext, the top ten cases are all about defense of habitation and/or self-defense.

WestSearch is able to retrieve these results because these cases contain relevant discussions of defense of habitation and/or self-defense and each of these opinions has a headnote classified under 203k802 of the Homicide topic: Self-Defense, Duty to Retreat or Avoid Danger, Confrontation on Accused’s Own Premises. If you run this search in another service, the relevant cases do not come up or are buried far down in the result list.

In these examples, the researcher saves valuable time because WestSearch is able to retrieve relevant documents even if the exact search terms are not in the court’s opinion. This means legal researchers can be confident in the results and that they haven’t missed a key case, especially if they are under a tight deadline.

X. DOES EDITORIAL QUALITY MAKE A DIFFERENCE?

In a recent survey in which 37 law students were asked whether they had used the Key Number System prior to using WestlawNext, 81% answered yes and all agreed that knowledge of Key Number System enhanced research quality.

In another survey, 70 WestlawNext users (partners, associates and paralegals) were asked about the value of West’s trusted expertise, and 84% strongly agreed or agreed that it makes a difference for quality research that Westlaw/WestlawNext has had attorney-editors analyzing, categorizing and summarizing the law for over 125 years.

Even in today’s digital age, the human element that goes into our rigorous editorial process is a key element to the trust and confidence that legal professionals feel when using our products and services.

Hi

EXHIBIT 33

WEST KEY NUMBER SYSTEM ON WESTLAW NEXT

The most widely used classification system for American law on the world's most advanced legal research system



The West Key Number System® is the master classification system of U.S. law and widely regarded as the cornerstone of effective legal research. For over 100 years, West Topic and Key Numbers have offered legal researchers a convenient way to zero in on a particular legal issue and quickly find on-point cases. Now on WestlawNext®, WestSearch® incorporates our proprietary analysis of the law with cutting-edge search technology to deliver the best results even faster.

Why use the West Key Number System?

- **It is comprehensive and precise.** West attorney-editors index cases into more than 400 topics and 98,000 points of law, enabling you to quickly find other cases that address your exact legal issue – in any jurisdiction.
- **It helps you search for legal concepts.** Legal research is often a hunt for principles or concepts not easily retrieved with literal word searches. The Key Number System identifies and indexes legal concepts so you can find cases stating or applying a legal concept, even if those terms aren't in the opinion.
- **It helps you find what you need faster.** Easily identify on-point Key Numbers by browsing or searching the outline on WestlawNext. Or, click on Key Numbers inside documents to quickly locate cases with the same or similar legal concepts and principles.
- **It is current and accurate.** As the law evolves, so does the West Key Number System. Each year, we make hundreds or even thousands of changes – adding new Key Numbers for emerging topics and reclassifying expanding areas of the law. Plus, it's completely integrated with KeyCite®, so you'll know the cases you rely on are still good law.

INSIDE: See how to use the West Key Number System and how the WestSearch algorithm automatically leverages it for you.



THOMSON REUTERS™

FIND SIMILAR CASES ON A LEGAL ISSUE

Each legal issue in a case published by West is identified, summarized in a headnote, and assigned a Topic and Key Number in the West Key Number System. This arrangement of breaking a court opinion into distinct points of law and then classifying each point with a number has made the West Key Number System the de facto classification system for all American law. Finding one case on point leads you directly to others – in your jurisdiction or any other – so you'll be confident that you haven't missed anything.

WestlawNext® powered by WestSearch™

JDC-0086 | Folders | History | Sign Off

Q Enter search terms, citations, databases. All State & Federal SEARCH advanced Acme Corporati... (1)

Bush v. Gore
Supreme Court of the United States | December 12, 2000 | 531 U.S. 98 | 121 S.Ct. 525

Document Filings (30) Negative Treatment (50) History (32) Citing References (3,854) Powered by KeyCite

Return to History 15 of 1,471 results Go to Q AA

West Headnotes (10) Change View

1 United States
The individual citizen has no federal constitutional right to vote for electors for President of the United States unless and until state legislature chooses statewide election as means to implement its power to appoint members of Electoral College. U.S.C.A. Const. Art. 2, § 1, cl. 2.
12 Cases that cite this headnote

2 Elections
When state legislature vests right to vote for President in its people, the right to vote as legislature has prescribed is fundamental, and one source of its fundamental nature lies in the equal weight accorded to each vote and equal dignity owed to each voter. U.S.C.A. Const. Art. 2, § 1, Art. 2, cl. 2.
11 Cases that cite this headnote

3 United States
The State, after granting individual citizens the right to vote for electors for the President of the United States, can take back the power to appoint electors. U.S.C.A. Const. Art. 2, § 1, cl. 2.
1 Case that cite this headnote

393 United States
393 Government in General
39325 Presidential electors

144 Elections
144 Right of Suffrage and Regulation Thereof in General
144:8 Statutory Provisions Conferring or Defining Right
144:10 Construction and operation

1. Find similar cases on a legal issue or point of law by clicking a Topic or Key Number in the classification hierarchy next to the headnote.
2. Find similar cases on a broad topic by clicking the topic above the headnote.
3. Find cases that cite to your case for the legal issue or point of law in the headnote by clicking the link below the headnote.

4. View headnote results for your Key Number.
5. View summaries of the decisions.
6. Navigate up or down the topic hierarchy to retrieve additional results.
7. Change the jurisdiction of your headnote results at any time.

WestlawNext® All Content 10—Construction and operation JDC-0086 | Folders | History | Sign Off

Q Search 110—Construction and operation U.S. Supreme Court SEARCH Acme Corporati... (1)

Apply Filters Cancel

Search within results Q

Key Number Select

Search other sources:
News
Dockets
Patents
Public Records
Company Information

10—Construction and operation (3) 7

Jurisdiction: United States Supreme Court Change

13

Select all items No items selected

144 ELECTIONS (1,049)
— 144: Right of Suffrage and Regulation Thereof in General (691)
— 144:8 Statutory Provisions Conferring or Defining Right (23)
— 144:10 Construction and operation (3)

1. Bush v. Gore
Supreme Court of the United States | December 12, 2000 | 531 U.S. 98

4 Headnote: When state legislature vests right to vote for President in its people, the right to vote as legislature has prescribed is fundamental, and one source of its fundamental nature lies in the equal weight accorded to each vote and equal dignity owed to each voter. U.S.C.A. Const. Art. 2, § 1; Art. 2, cl. 2.

5 Document Preview: GOVERNMENT - Elections. Ordered manual recounts of presidential ballots, without specific standards, violated equal protection.

2. State of S.C. v. Katzenbach
Supreme Court of the United States | March 7, 1966 | 383 U.S. 301

Headnote: Voting Rights Act of 1965 was designed by Congress to banish racial discrimination in voting. Voting Rights Act of 1965, § 2 et seq., 42 U.S.C.A. § 1973 et seq.

Document Preview: Bill in equity for determination of validity of selected provisions of Voting Rights Act of 1965 and for injunction against enforcement of provisions by United States Attorney General. The Supreme Court, Mr. Chief Justice Warren, held that provisions of Voting Rights Act of 1965 pertaining to suspension of eligibility tests or devices, review of proposed alteration of voting qualifications and procedures, appointment of federal voting examiners, examination of applicants for registration, challenges to eligibility listings, termination of listing procedures, and enforcement procedures in criminal contempt cases were appropriate means for carrying out

TOOLS & RESOURCES
Title Search
Q Search headings

FIND RELEVANT CASES USING THE WEST KEY NUMBER DIGEST

The West Key Number Digest contains the complete Topic and Key Number outline used by West attorney-editors to classify headnotes. Use the digest to locate Topic and Key Numbers related to your issue and to retrieve headnotes classified under those Topic and Key Numbers.

- Access the West Key Number System page from the Tools tab on the home page.** The first screenshot shows the WestlawNext home page with the 'Tools' tab selected in the top navigation bar. A red circle with the number 1 highlights the 'West Key Number System' link in the 'Browse' section.
- Add to Favorites** for direct access from your home page. The second screenshot shows the 'West Key Number System' page with the 'Add to Favorites' link highlighted by a red circle with the number 2.
- Search Key Number titles** to find an on-point Key Number quickly. The third screenshot shows the 'West Key Number System' page with the search bar containing the text 'right to vote' and a red circle with the number 3 highlighting the search button.
- Browse a hierarchy of legal topics** to familiarize yourself with an issue or area of law, or to locate specific Key Numbers. The fourth screenshot shows the search results for '144 ELECTIONS' with a red circle with the number 4 highlighting the '144 ELECTIONS' link in the left sidebar.
- Search for headnotes** classified under a particular Topic or Key Number. Search however you want – simple descriptive terms or Boolean Terms and Connectors – and specify a jurisdiction (up to three) for your results. The fifth screenshot shows the search results for '144 ELECTIONS' with a red circle with the number 5 highlighting the search bar.
- View headnotes** by drilling down and clicking on a specific Key Number. Or select multiple Key Numbers and click View Headnotes. The sixth screenshot shows the search results for '144 ELECTIONS' with a red circle with the number 6 highlighting the 'View Headnotes' button.

LET WESTSEARCH TECHNOLOGY AUTOMATE THE PROCESS FOR YOU

The WestSearch algorithm— the world's most advanced legal search engine — automates the research process by emulating the best practices of experience legal researchers. Enter a query in simple descriptive words and WestSearch will automatically use our proprietary research tools — like the West Key Number System, KeyCite, and West's statutory indexes — to deliver the best results faster.

Here's how the Key Number component works:

The West Key Number System is the foundation of WestSearch. Because West attorney editors have read, summarized, and classified the law for over 100 years, WestSearch can identify the topics of law best represented by your search terms and return highly relevant documents for those topics — even if the documents don't have

the terms you put into the search box! WestSearch automatically searches every case in every jurisdiction to find headnotes that match your search terms. Then, WestSearch analyzes the Key Numbers those headnotes are classified under and utilizes them to help find on-point documents in your selected jurisdiction.



Visit WestlawNext.com

For more information, contact your
Westlaw Representative, or call
1-800-328-0109.



THOMSON REUTERS™

EXHIBIT 34

LIBRARY OF CONGRESS

*Copyright Office
of the United States*


WASHINGTON, D.C.

THIS IS TO CERTIFY that on August 8, 2019 a claim to copyright a work identified as **GROUP REGISTRATION FOR AUTOMATED DATABASE TITLED "WESTLAWNEX"; UNPUBLISHED UPDATES APRIL 1, 2019 THROUGH JUNE 30, 2019; REPRESENTATIVE CREATION DATE: JUNE 5, 2019; UPDATED DAILY** was registered under number **TXu 2-178-620**. This work was registered in accordance with provisions of the United States Copyright Law (Title 17 United States Code).

THIS IS TO CERTIFY FURTHER, that the attached is an additional certificate of this work.

IN WITNESS WHEREOF, the seal of this Office is affixed hereto on August 22, 2020.

Maria Strong
Acting United States Register of Copyrights and Director

By: 
Jarletta Walls
Section Head
Records Research and Certification Section
Office of Public Records and Repositories

Use of this material is governed by the U.S. Copyright law 17 U.S.C. 101 et seq.

Certificate of Registration



This Certificate issued under the seal of the Copyright Office in accordance with title 17, *United States Code*, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

Marie Strong

Acting United States Register of Copyrights and Director

Registration Number

TXu 2-178-620

Effective Date of Registration:

August 08, 2019

Registration Decision Date:

February 04, 2020

Title

Title of Work: Group Registration for automated database titled "WestlawNext", unpublished updates from April 1, 2019 through June 30, 2019; representative creation date: June 5, 2019; updated daily.

Completion/Publication

Year of Completion: 2019

Author

• **Author:** West Publishing Corporation
Author Created: original and revised text and compilation of legal material
Work made for hire: Yes
Citizen of: United States
Anonymous: No
Pseudonymous: No

Copyright Claimant

Copyright Claimant: Thomson Reuters Global Resources
Neuhofstrasse 1, 6340 Baar, Switzerland
Transfer statement: By assignment

Limitation of copyright claim

Material excluded from this claim: previously registered unpublished database
Previously registered: Yes
Basis of current registration: This is a changed version of the work.
New material included in claim: daily updates of original and revised text and compilation of legal material

Certification

Name: Rebecca Matzek

Date: August 05, 2019

Copyright Office notes: Regarding limitation of claim: Registration does not extend to U.S. government works or government edicts that have been issued by any state, local, or territorial government, including legislative enactments, judicial decisions, administrative rulings, public ordinances, or similar types of official legal materials that have the force of law. 17 U.S.C. 105; Compendium 313.6(C)(2).

Regarding previous registration: Information added by CO from information provided by applicant.

Registration #: TXu002178620
Service Request #: 1-7993872098

Thomson Reuters
Rebecca Matzek
610 Opperman Drive
St. Paul, MN 55164 0526

EXHIBIT 35



COPY OF DEPOSIT

**TXu 2-178-620
(00501678120)**

NOTE: that beginning October 1, 2006 the Copyright Office discontinued the practice of stamping incoming deposits with accession stamp dates and registration numbers. Incoming deposits are now identified with barcode labels.

WESTLAWNEXT DESCRIPTIVE STATEMENT

Pursuant to 37 C.F.R. § 202.20(c)(2)(vii)(D)(5) (effective March 31, 1989), Thomson Reuters Global Resources submits the following Descriptive Statement in support of its application to register its copyright in the daily updates from April 1, 2019 to June 30, 2019, in its unpublished automated database, WESTLAWNEXT, a computer-assisted legal research service:

- (1) Title of database: WestlawNext
- (2) Representative date of creation of version of database being registered: June 5, 2019.
- (3) Name and address of copyright claimant:

Thomson Reuters Global Resources
Neuhofstrasse 1
6340 Baar
Switzerland

- (4) Name and content of data files, origin of data and approximate number of data records in each file: See Descriptive Statement Exhibit A, attached hereto.
- (5) Frequency of updates to WESTLAWNEXT database: Daily.
- (6) Description of copyright notice embodied in machine-readable form of WESTLAWNEXT database: See Descriptive Statement Exhibit B, attached hereto.
- (7) Sample of visually perceptible copyright notice placed on any copies of the work [or on magnetic tape reels or containers thereof]: There are no copies of the work and therefore there are no visually perceptible copyright notices from which to submit a sample.

Contents of Deposit Material

A total of 50 data records from the single file database are submitted with the Form TX and this Descriptive Statement pursuant to 37 C.F.R. § 202.20(c)(2)(vii)(D)(5) (effective March 31, 1989). The representative data records submitted consist of entirely new material added to WESTLAWNEXT since the last registration. All data records submitted were loaded to WESTLAWNEXT on the representative date, June 5, 2019. The copyright for WESTLAWNEXT is for both original text and compilation of data records. Original text by Thomson Reuters is highlighted on the data records.

DESCRIPTIVE STATEMENT
APPENDIX A:

DATA FILE

WestlawNext Data File: Total number of data records **11,205,374,706**.

Legal and Practitioner materials, including but not limited to, court and tribunal cases, legislation, rules, regulations, administrative materials from federal, state and other jurisdictional sources, text of legal treatises, practitioner guides, journals, newspapers, magazines, newsletters, and other originally authored materials from Thomson Reuters and other publishers, court filings, editorial enhancements to and summaries of court opinions, annotated and unannotated codes from 50 states, the United States government, and other jurisdictions, legislative materials, directories and reference materials, subscriber documents related to use of WestlawNext, and cite verification materials.

DESCRIPTIVE STATEMENT
APPENDIX B:

COPYRIGHT NOTICES VIEWABLE IN ALL WESTLAWNEXT VERSIONS

1. WestlawNext copyright notice displayed to user at sign-on and on hard copy when off-line print option is used:

Availability: 24 hours a day, 7 days a week.

© 2019 Thomson Reuters. Copyright is not claimed as to any part of the original work prepared by a U.S. government officer or employee as part of that person's official duties. All rights reserved. No part of a Westlaw transmission may be copied, downloaded, stored in a retrieval system, further transmitted, or otherwise reproduced, stored, disseminated, transferred, or used, in any form or by any means, except as permitted under the terms of the Subscriber Agreement wherein you obtained access or with prior written permission. Each reproduction of any part of a Westlaw transmission must contain notice of copyright. WIN Natural Language is protected by U.S. Patent Nos. 5,265,065; 5,418,948; and 5,488,725. KeyCite is protected by U.S. Patent No. 7,529,756.

2. WestlawNext copyright notice displayed on every screen of WestlawNext and on hard copy when on-line print, off-line print or "print-screen" options are used:

© 2019 Thomson Reuters. No claim to original U.S. Government Works.

EXHIBIT 36



WestSearch™

WestlawNext Search Technology

WestlawNext simplifies legal research. WestSearch, the WestlawNext search engine, enables you to search broadly, yet still retrieve the documents and answers you want to resolve your specific legal questions.

There is no need to specify a database—every search retrieves documents from all core legal content for the jurisdiction you choose. Nor is it necessary to formulate a query using Boolean logic or natural language. On WestlawNext, you simply type terms that describe your issue in the text box at the top of the page and click **Search** (Figure 1). WestSearch retrieves comprehensive results that are ranked by relevance.

WestSearch is also smart. It recognizes what you are looking for based on what you type in the text box. If you type descriptive terms or a Boolean Terms and Connectors query in the text box, WestlawNext retrieves results corresponding to the search method you used. If you type a citation, e.g., **127 sct 2162**, WestlawNext retrieves the document with that citation. Similarly, if you type one or more parties' names, e.g., **kelo v. new london**, WestlawNext retrieves cases with those party names.

WestlawNext Content: Knowing What You Are Searching

WestlawNext content is organized by category. Content categories are listed on tabs in the *Browse* section of the home page (Figure 1):

- All Content: The core legal content categories, plus forms, news, and links to content on Westlaw® (e.g., dockets or public records)
- Federal Materials: Content categories for federal jurisdictions
- State Materials: Content categories for each state and the District of Columbia
- Topics: Content categories for practice areas
- Tools: Research tools, such as the West Key Number System®, and links to Westlaw resources not available on WestlawNext, such as the Alert Center, *Black's Law Dictionary*®, FormFinder, and bill and regulation tracking content.



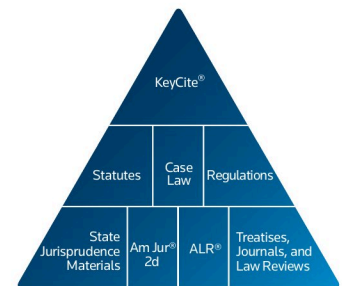
Figure 1. WestlawNext home page

WestlawNext is available on the Web at next.westlaw.com.

Category:

Research Fundamentals

For research assistance 24 hours a day, seven days a week, call the West Reference Attorneys at 1-800-850-WEST (1-800-850-9378).



The Westlaw Research Pyramid

Using the Westlaw Research Pyramid

On WestlawNext, you can search all the document types in the Westlaw Research Pyramid—statutes, case law, regulations, and secondary sources—with a single WestSearch search.



Core Legal Content Available on WestlawNext

Core legal content on WestlawNext comprises 12 categories:

- **Cases.** All federal and state cases reported in West's® National Reporter System®, as well as unreported cases.
- **Statutes and Court Rules.** *United States Code Annotated*® (USCA®) and rules of procedure for the federal courts, plus statutory compilations and court rules for all 50 states and the District of Columbia.
- **Regulations.** *Code of Federal Regulations* (CFR) and compilations of state administrative rules and regulations for all 50 states and the District of Columbia.
- **Administrative Decisions and Guidance.** Adjudications by federal and state administrative agencies, advisory opinions, Treasury Department and Internal Revenue Service materials, and other administrative materials providing guidance on state and federal rules and regulations.
- **Trial Court Orders.** Final judgments and other court orders issued by state trial courts.
- **Secondary Sources.** Analytical resources on WestlawNext include comprehensive legal encyclopedias such as *Corpus Juris Secundum*® (C.J.S.®); *American Law Reports* (ALR®); the American Jurisprudence (Am Jur®) family of products; federal treatises and forms such as *Federal Practice and Procedure*® (Wright & Miller) and *West's Federal Forms*; restatements of the law and model jury instructions; state-specific texts and practice manuals; topical treatises; law reviews and bar journals; and legal newspapers.
- **Briefs.** Briefs and petitions filed with state and federal appellate courts.
- **Pleadings, Motions, and Memoranda.** Pleadings, such as complaints and answers; motions; and memoranda filed in state and federal trial courts.
- **Expert Witness Testimony.** Affidavits, depositions, and transcripts of trial testimony of expert witnesses from state and federal courts.
- **Jury Verdicts and Settlements.** Summaries of jury verdicts, judgments, settlements, and arbitrations filed in state and federal courts.
- **Pending and Proposed Legislation.** Session laws passed by the current Congress and state and legislatures.
- **Pending and Proposed Regulations.** Federal rules and regulations reported in the *Federal Register* and state administrative registers.

When you run a search, WestSearch searches all core legal content on WestlawNext by default. This means that a single description of your legal issue, e.g., **tree branch across property line**, searches content in all these categories and retrieves relevant documents. The overview of your search result (Figure 2) lists the citations of documents retrieved by your search and enables you to view your highlighted search terms in the context of surrounding terms. You can click a content category in the left column, e.g., **Briefs**, to display the result page for that content category.

The screenshot shows the WestlawNext interface. At the top, there's a search bar with the query 'tree branch across property line' and a 'SEARCH' button. Below the search bar, there's a 'VIEW:' section with a list of categories and their counts: Overview (13), Cases (232), Statutes (52), Regulations (104), Administrative Decisions & Guidance (130), Trial Court Orders (24), Secondary Sources (107), Briefs (135), Pleadings, Motions & Memoranda (59), Expert Testimony (111), Jury Verdicts & Settlements (101), Pending & Proposed Legislation (100), Pending & Proposed Regulations (101), and All Results (1,256). The main content area is titled 'Overview (13)' and shows a list of cases. The first case listed is 'Sterling v. Weinstein', which is highlighted. The case details show it is from the Municipal Court of Appeals for the District of Columbia, dated July 13, 1950, 75 A.2d 144. The case summary states: 'Action by Louis Weinstein against Mrs. Frederick A. Sterling for damages and for abatement of a nuisance. The Municipal Court for the District of Columbia, Civil Division, rendered a...'. The summary also includes a quote: '...On defendant's land, very close to the alley line, are two rather large trees, the branches of which extend across the alley and overhang plaintiff's property...'. Another quote follows: '...However, we think the cases are in agreement that trees ordinarily are not nuisances; that if under any circumstances overhanging branches which merely cast shade or drop leaves on the land are not nuisances; that if under any circumstances overhanging branches or protruding roots do constitute a nuisance it is only when they do sensible or substantial harm; and that, whether nuisances or not, a landowner may always cut away to his property line branches and roots from trees of the adjoining owner...'. The page also has a 'Set Default' button and a 'Select all items' checkbox.

Figure 2. WestlawNext search result overview

Selecting Specific Content to Search

To select specific content to search, click a tab, e.g., **State Materials**, in the *Browse* section. Then click a content category, e.g., **Illinois**. A corresponding tabbed text box is displayed at the top of the page. Type your search in the text box to search all content listed on the page you are viewing, e.g. all core legal content for Illinois.

WestSearch: Knowing How You Are Searching

WestSearch is a sophisticated search engine, especially developed for searching legal content. It integrates West's market-leading research tools such as KeyCite®, the West Key Number System, and ResultsPlus®, with West's proprietary analytical tools (authoritative treatises, legal encyclopedias, and practice guides) and editorial enhancements to case law, statutes, and regulations, as well as links to related documents. WestSearch also learns from usage patterns established by other WestlawNext researchers. It employs these editorial assets to retrieve comprehensive results, with the most relevant documents listed at the top of the result page.

Value Added by West Attorney-Editors

WestSearch is able to take full advantage of the editorial enhancements added to many documents in core legal content. West attorney-editors analyze these documents and add annotations and links that help you find the documents you want.

Cases

- **West headnotes.** West headnotes in case law documents summarize each point of law covered in an opinion. West editors add additional alternative search terms to headnotes that improve WestlawNext search results. For example, e.g., when a court uses the terms *lessor* and *lessee* in its opinion, West editors may add the terms *landlord* and *tenant* to the headnotes. Editors also add synonyms to the opinion synopsis—a concise summary of facts and issues in the case.
- **West Key Number System.** Each headnote is classified to the West Key Number System, the master classification system of U.S. case law. The system can be used in any state or federal jurisdiction to find cases discussing a specific point of law. WestSearch also finds relevant statutes, rules, secondary sources, and other core content documents.
- **Integrated documents.** More than 5 million links are added every year to documents on WestlawNext. These links are integrated into WestSearch, which uses them to link related materials.
- **ResultsPlus technology.** Developed for Westlaw and built into WestSearch, the technology behind ResultsPlus suggests materials related to retrieved cases, including ALR annotations and Am Jur articles, as well as West topic and key numbers.

KeyCite

The West editorial process adds KeyCite citing references to every case in West's National Reporter System, as well as more than 1 million unpublished cases and state and federal statutes, regulations, and administrative decisions. This interlinking of case law and other core content, including citing references in secondary sources, is part of WestSearch and leads to more comprehensive and relevant search results.

Statutes

- **Notes of decisions.** Editorially added case law annotations provide a complete picture of how a statute has been construed or applied by the courts.
- **West online indexes.** There are more than 20 million references categorized by topic and linked to a statutory section on WestlawNext. The editorially created index entries also enrich the search points for WestSearch.

- **Historical and statutory notes.** West editors track and process the more than 25,000 laws passed by Congress and state legislatures each year, adding historical and statutory notes that provide a picture of a statute's history and link statutes and pending legislation.

Value Added by Technology

WestSearch technology analyzes the usage history of each document on WestlawNext:

- How often have judges, attorneys, and legal scholars cited a case while discussing an issue?
- How have users interacted with a document, i.e., How often have they printed a document? Which documents did they link to most often from a particular document? Did they save a document to a folder or add a note to the document?

WestSearch aggregates these usage patterns and analyzes the relationships to establish connections between documents and between particular documents and issues. Then, when you search a similar issue on WestlawNext, WestSearch uses this history to expand your search by connecting documents that relate to each other. WestSearch also evaluates the documents retrieved by your search to help determine relevancy (ranking the more relevant documents higher in your search result). This helps bring the most relevant documents—those with content most highly related to your issue—to the forefront of your search results.

WestSearch: Putting It All Together

By combining West editorial enhancements and advanced search technology, WestSearch becomes your partner in online legal research. A comprehensive, easy-to-use, and up-to-date partner that enables you to perform accurate and effective legal research. Based on a simple word search of the text of documents in an extensive content library, WestSearch provides you with a list of relevant cases, statutes, regulations, court filings, and analytical materials. In addition, WestSearch evaluates document characteristics, editorial enhancements, and search patterns behind the scenes to deliver thorough, reliable results you can count on without fear of missing anything. So thorough is WestSearch, your search terms may not even appear in the most relevant documents retrieved by your search.

In addition to complete search results, WestSearch sorts your documents to list the most relevant documents at the top of the results. With the most relevant documents ranked first, you can quickly view the documents you want without having to sift through a long result list. As a result, WestSearch not only performs a very efficient search, but you can have confidence that you have found the documents that you need to understand the legal issues and counsel your client, draft documents for your client, or prepare for trial or appeal.

For assistance using WestlawNext, call 1-800-850-WEST (1-800-850-9378).
For free reference materials, visit west.thomson.com/westlaw/guides.

EXHIBIT 37



WestSearch: The world's most advanced legal search engine.

Designed to help you deliver the best results, quickly and with more confidence than ever before.



You type a query into the WestSearch® all-in-one search box.

Just select your jurisdiction and enter your issue in simple descriptive words, Terms and Connectors, or even a citation. WestSearch automatically recognizes your search format. **You'll save time because you don't have to pick a database or use exact search terms.**



WestSearch does a global search of the most authoritative legal information in the world.

The most comprehensive, most trusted collection of legal content is gathered from Westlaw's close relationships with the courts, legislatures, and leading authors of analytical content – tens of thousands of resources in the industry's finest online library, WestlawNext®. **You'll have confidence knowing you're drawing from the most accurate and reliable authority.**



Intelligent search technology draws on editorial expertise.

WestSearch automates the research process by emulating the best practices of experienced legal researchers. By incorporating over 125 years of Westlaw's proprietary analysis of the law – enhancements like Key Numbers, KeyCite®, and headnotes – WestSearch can retrieve relevant documents even if they contain phrasing different from your query. **How? Look inside to see details.**



WestSearch analyzes legal precedent and search patterns on your issue.

WestSearch identifies meaningful document interactions that occur on a large scale. Relevancy is influenced by how often legal professionals use KeyCite and save or print certain documents when they've searched on a similar issue, as well as how often other judges, attorneys, and legal scholars cite to a document for your issue. **You'll harness the insight of legal professionals.**



Then WestSearch delivers the best results ranked by relevance.

WestSearch draws connections between documents and identifies only the most relevant information for your request. By examining your search terms, related legal concepts, and dozens of other document characteristics, the most relevant documents are placed on top of the list – and it all happens in seconds. **You'll get the best documents for your research and a better understanding of the law.**



So you can do your research more efficiently.

How much more efficiently? In a March 2010 study, researchers using WestlawNext completed research tasks, on average, 64% faster than researchers doing the same tasks on Westlaw® Classic. **You'll have more time to achieve optimal results.**



THOMSON REUTERS™

To locate the best documents for your research, WestSearch employs our editorial enhancements and proprietary research tools much like an expert researcher would – only faster.

Key Numbers connect a case to all related content in the most well-respected classification system for American law – the West Key Number System®.

With access to the most authoritative taxonomy of U.S. law, WestSearch identifies the topics best represented by your search terms and returns highly relevant documents for those topics.

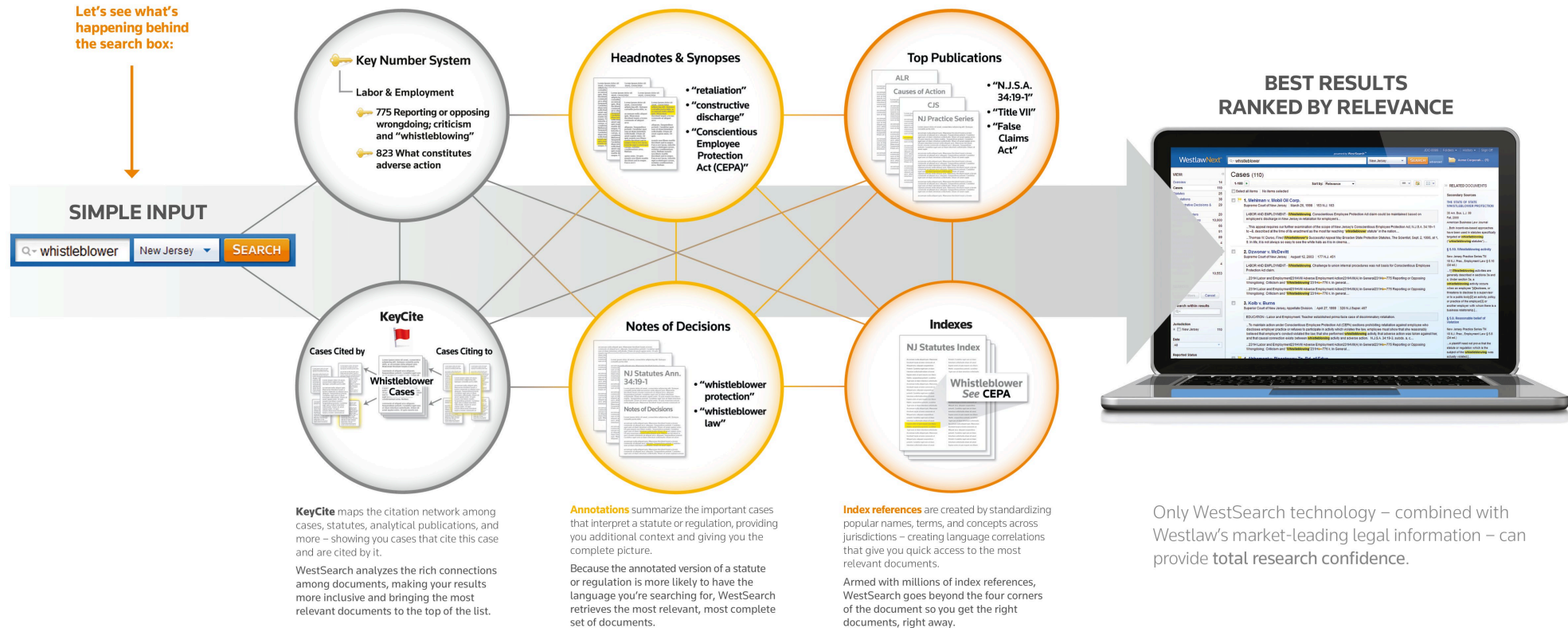
Added search terms, provided by attorney-editors as part of an exclusive 22-step process, make every document more “findable” and easier to understand.

WestSearch combs through editor-written headnotes and synopses so you find the right documents – even when your search terms don’t exactly match the court’s opinion.

Secondary sources from market-leading authors and publications are linked and cross-referenced to provide the most comprehensive research experience.

With thousands of practice guides, legal encyclopedias, and authoritative treatises, WestSearch leverages this trusted expertise to find primary law that is heavily discussed in each jurisdiction.

Let’s see what’s happening behind the search box:



Only WestSearch technology – combined with Westlaw's market-leading legal information – can provide total research confidence.

WestlawNext®

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**For more information, contact your
Westlaw Representative, or call
1-800-328-0109.**



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EXHIBIT 38

West Publishing Turns 150 – Comms Plan**Draft** – April 19, 2022

Background

John B. West Publisher and Book Seller was founded in 1872, and we will be marking the sesquicentennial in June of this year. The business was the predecessor to West Publishing, which was established 10 years later, in 1882. The celebration will play across audiences, with a proposed employee celebration, PR activities with Twin Cities and trade press and a customer campaign, driven by product marketing and backed by comms, that will support important prelaunch themes in the run-up to New Westlaw.

We will align to the overall theme of gratitude, positioning our legacy of innovation as customer inspired and driven by our partnership with the legal professionals who use our products. This will also support our purpose work – in fact, it would be impossible to tell our story in a way that wouldn't drive our purpose narrative.

As part of our highlights, we also will be celebrating the 25th anniversary of the launch of KeyCite, unveiled in 1997 at the AALL annual meeting.

Goals

- Celebrate an important milestone in company history
- Reenforce our legacy of customer-centric innovation and customer partnership
- Educate market about importance of editorial value-add in advance of New Westlaw

Our story***West's legacy of customer-driven innovation***

150 years ago, the United States was a country changing. In 1872, the second industrial revolution had begun, and people were moving from farms to cities to find work in factories. It had been just seven years since the Civil War ended, and its winning general, Ulysses S Grant, was president. There were just 37 states in the union, but Westward expansion was well underway; there would be 8 more states by the turn of the century.

The U.S. legal system at the time was a collage of laws and case law. And then just as now, equal justice under law was predicated on a clear understanding of how courts have treated citizens in criminal and civil matters, and that required fair access and consistent interpretation of the nation's laws. Yet, in Minnesota – a new state of just 14 years in 1872 – published court decisions were taking months or years to find their way from courts in the east to the state's law offices and court rooms.

But that was about to change.

A regional book and office supply seller, John B. West, catered to the needs of lawyers across the region. His frequent visits helped him to understand and anticipate their needs – particularly for information. In 1872, West founded John B. West Publisher and Book Seller, the predecessor to West Publishing, and began a legacy of innovation built upon close collaboration with customers.

West's spirit of innovation and his legacy of customer partnership continue to this day. Many of his early innovations – creating a system to quickly get judicial decisions into the hands of legal professionals, organizing them into a living taxonomy of the law, and hiring attorneys to analyze and annotate each

decision – were powerful tools to speed the important and arduous task of legal research in the early days West Publishing. Today, 150 years later, they provide unique content and metadata to train and power AI and machine learning technologies that allow legal researchers to work much faster and with more accuracy and confidence.

Timeline of innovation and customer partnership

- 1872** John B. West establishes John B. West Publisher and Book Seller in St. Paul, Minn.
- 1876** West began publishing The Syllabi – a weekly publication that contained excerpts of opinions from the Minnesota courts. A yearly subscription was \$3.
- 1877** The Syllabi evolved into the North Western Reporter.
- 1879** Regional Reporter system is established. West began publishing The North Western Reporter with editorial enhancements and court decisions from Minnesota, Wisconsin and Dakota territories, in response to attorney requests. The Reporter quickly became the most trusted source of information for legal practitioners.
- 1908** West Key Number System introduced. With a vast amount of content now at their disposal, West adds attorney-created editorial enhancements and introduces the West Key Number System, a topic and key number taxonomy and powerful tool to help attorneys quickly find relevant cases on a particular issue. Through continuous updates, revisions and expansion, the West Key Number System now includes 363 topics and more than 110,000 subtopics.
- 1927** West indexes all US laws. With the growing complexity of US law and the government’s failed attempt to classify its own documentation, West Publishing codifies all US Statutes. West’s version would go on to become the most authoritative classification system of US law and is still in use today.
- 1975** West Publishing launches its first computerized database – Westlaw. Using purpose-built Westlaw terminals, legal researchers are able to search the full text of legal documents with specific words and phrases, allowing lawyers to quickly pinpoint the information they need and drastically reducing research time.
- 1993** Launched WIN (Westlaw is Natural). WIN was the first commercially available search engine deploying probabilistic rank retrieval, a form of machine learning, in its ranking functions.
- 1997** West develops KeyCite, which, through a flagging system, denotes whether or not a cited case is still good law
- 1998** Westlaw.com provides Westlaw via the Web. The business also begins expanding the Westlaw franchise globally.
- 2003** Launched ResultsPlus: A content and behavior-based recommender system for legal researchers
- 2006** Developed PeopleFinder Report: a web-scale concordance engine that created one of the largest person-centric knowledge graphs anywhere, connecting all public records that pertain to an individual. Westlaw was one of the earliest in the information industry – not just legal – to introduce full and machine-assisted automation at scale for text mining and content enhancement technologies.
- 2010** Thomson Reuters launches the WestlawNext legal research system, which incorporates decades worth of search and editorial intelligence with the latest technological innovations.
WestlawNext included WestSearch: a suite of learning-to-rank algorithms trained on legal content, meta-data and user behavior and highly tuned to the various legal research tasks
- 2016** Unveiled Research Recommendations and Folder Analysis: Research Recommendations is an AI-based tool that surfaces additional relevant documents within a research session. Folder Analysis

uses AI tools to identify the legal issues present in a Westlaw folder and suggest additional documents related to those issues

- 2018** Introduced WestSearch Plus. Part of the new Westlaw Edge, WestSearch Plus is a next-generation legal search engine that uses state-of-the-art AI to help users find authoritative answers even faster.
- 2018** Released KeyCite Overruling Risk, a first-of-its-kind feature that delivers another layer of trust to ensure good law is being cited. The new citation tool shows a specially created orange KeyCite icon to caution a user that a point of law referenced in the case has been implicitly undermined based on its reliance on an overruled or otherwise invalid prior decision.
- 2019** Introduced Westlaw Edge Quick Check, a true document-analysis tool that swiftly and securely reviews motions, briefs or text with citations to find highly relevant authority, secondary sources and other related briefs or memoranda to ensure users haven't missed anything important. Its state-of-the-art AI detects the legal issues covered and identifies highly relevant recommendations. In doing so, it often considers hundreds of thousands of possibilities – far more than any researcher could go through.
- 2021** Building on nearly three decades of AI enablement and specifically tuning our technology to attorney-authored content in Westlaw Edge, we applied AI functionality to a new proprietary editorial content set from Practical Law, including a new AI-driven question-answering feature that leverages the legal expertise of our attorney editors to provide answers to legal research questions, along with links to relevant Practical Law content.

Tactics

Customer/market

Tactic	Detail	Notes/needs
Trade media relations	Press release, virtual press kit	Press Kit – from above: our story and timeline. Include press release and quote from judges/attorneys.
	Pitch to Bob or Jean focused on our innovation story, and with a special focus on attorney editors and the taxonomy	
	Pitch byline to ABA Journal	
	Infographic – timeline, WKNS, KeyCite, ...	
Social	Do a 4 or 5-part series on Legal Current including a podcast, history, legacy of innovation, attorney editor, etc.	Really dig into the editorial statistics and the editorial process.
	Screenshots/Images – WIN, Westlaw Classic(s), Next, Edge, Book Covers, BLD image, etc. ... all shareable via Twitter, used for LinkedIn images in articles, provide to media, etc.	Coordinate with TR social to amplify Would benefit from writing help
Event: AALL	Media relations at show	Demos for media

West Publishing Turns 150 P/3

	Can we incorporate something of a “celebration” or “customer inspiration” at AALL?	
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Local Media

Tactic	Detail	Notes/needs
Sponsorships	Update our MPR sponsorships for the rest of the year <i>* We will not use this campaign in our other sponsorships ... Twins, Vikings, Wild, etc.</i>	Chat with Betsy
Local media relations	Pitch to Star Tribune about this milestone and our history in the Twin Cities	
	Press release to local business publications	
	Consider an editorial piece on being true to your roots, while driving innovation, continually renewing yourself in support of customers	

Employees

Tactic	Detail	Notes/needs
Announcement	Joint piece from Paul and Jen P about @150	
Event	Repurpose a summer event in MSP for a big @150 shindig (Maura engaged)	Play off number 150: raffles, reasons why, etc., testimonials on importance of WL from employees.
Atrium/Yammer	Leverage work for Legal Current internally to tell our customer partnership and innovation stories across our timeline	Focus on AI, editorial, KeyCite, KNOS, statistics, reference attorneys, ...
Screens	I spoke to Luke about pulling together captioned photos to be played on the big screens during the campaign	

Risks

- The ROSS narrative may need to be managed **(allow JP to review)**
- Must manage our story of commitment to Minnesota, while sorting out our MSP location strategy

Things to consider

- We will likely need writing support/arms and legs for this work
- Ensure perfect alignment with marketing
- This should be a significant TR Purpose play... Essentially every word of it should reflect our sense of calling and purpose
- Can we get anyone to provide testimonials or quotes... Judge Page, any of the Pebble-level managing partners, academics ... Arthur Miller? **(Will speak to Tom L)**
- Explore opportunity with Mktg to leverage customers: Paul F. chatting with Dorsey & Whitney leader (first Westlaw firm?), Neil S. talking with XYZ firm, Andy with ..., and so on

Notes

West Publishing Turns 150 P/4

- For the 150, we could get in front of Athens and talk (to the market) about West bringing in attorney editors, creating the living taxonomy of the law (the WKNS), and the creation of the National Reporter System, as well as all that has fallen from this work – digests, Westlaw, KeyCite, AI enhancements aligned to WKNS and editorial (WIN, recommendation engine for secondary law, ... and on to WestlawNext and Westlaw Edge and ...
- **KeyCite** was launched in 1997. This could be a nice tie-in for introducing the KeyCite-based components of New Westlaw at AALL Annual – in front of an audience that really understands the value. Same general messaging from above. 25 years ago, it was about using tech to leverage attorney-editor work product – case citation and direct history – with WKNS aligned to the citation and citation network. Now, by expanding the editorial work and training the tech, we can do X, Y and Z.
-